

Expor. Stat. AUG 31 1946

# AMERICAN NURSERYMAN

*The Nurseryman's Forte: To Make America More Beautiful and Fruitful*

SEPTEMBER 1, 1946



*Spiraea Cantoniensis*

## SEEDS

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3 to 4 feet.....	55.00	3 to 4 feet.....	35.00	2 to 3 feet.....	27.00
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18 to 24 inches.....	20.00	18 to 24 inches.....	25.00	<b>Hydrangea Paniculata</b>	
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<b>Barberry Thunbergi</b>		18 to 24 inches.....	35.00	18 to 24 inches.....	35.00
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18 to 24 inches, transplants..	25.00	18 to 24 inches.....	25.00	12 to 18 inches.....	20.00
2 to 2½ feet, transplants.....	30.00	2 to 3 feet.....	27.00	18 to 24 inches.....	28.00
2½ to 3 feet, transplants.....	40.00	3 to 4 feet.....	35.00	2 to 3 feet.....	35.00
<b>Barberry, Red-leaved</b>		<b>Spiraea Anthony Waterer</b>		<b>Spiraea Van Houtte</b>	
12 to 15 inches, transplants..	25.00	12 to 15 inches.....	20.00	18 to 24 inches.....	16.00
15 to 18 inches, transplants..	32.00	15 to 18 inches.....	25.00	2 to 3 feet.....	22.00
18 to 24 inches, transplants..	40.00	18 to 24 inches.....	30.00	3 to 4 feet.....	30.00
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18 to 24 inches.....	20.00	18 to 24 inches.....	22.00	2 to 3 feet.....	30.00
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3 to 4 feet.....	30.00	3 to 4 feet.....	35.00	<b>Weigela Eva Rathke</b>	
<b>Deutzia Pride of Rochester</b>		<b>Philadelphus Lemoinei</b>		18 to 24 inches.....	35.00
18 to 24 inches.....	22.00	18 to 24 inches.....	25.00	2 to 3 feet.....	45.00
2 to 3 feet.....	27.00	2 to 3 feet.....	32.00	<b>Weigela Rosea</b>	
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# AMERICAN NURSERYMAN

[Registered U. S. Patent Office]

*The Nurseryman's Forte: To Make America More Beautiful and Fruitful*

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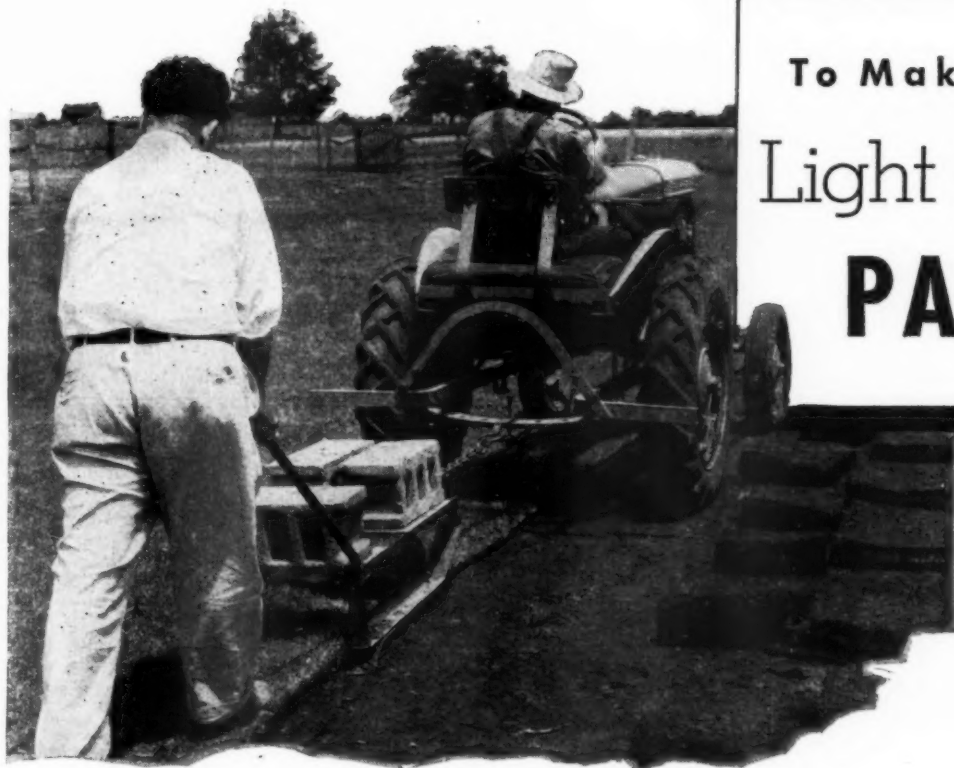
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**CLOSING DATE**—Present printing conditions require that more time be given for putting current issues of the American Nurseryman through the press. So if you send material for either the advertising or the news columns of the **September 15** issue, please mail in time to reach this office by **September 3**.

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# AMERICAN NURSERYMAN

F. R. KILNER, Editor

## Editorial

### WHO WILL DO THE WORK?

Among the more serious problems which face the nursery industry in the future is the question of who is going to perform the labor. With the anticipated expansion in the nursery business in the next decade, it is increasingly necessary to give thought to the labor requirements needed to carry on the work.

When we look back into the past, we see a changing pattern of the supply of labor. In the years preceding the first World war, large groups of nationals from Europe flocked to America. Many of the older nursery firms still have a few older men remaining of these groups. In many nurseries we find Italians, Portuguese, Poles or Hungarians who are the remnants of larger groups that immigrated here and often brought their friends and relatives. On the whole, such groups were hard workers, steady and satisfactory help, willing to do hard work at long hours for modest wages. However, during the past twenty-five years there has been little mass immigration from Europe, especially from the labor classes, and there is little prospect for such labor in the future.

America has emerged into the present century as one of the best educated nations in the world. This has done something to the supply of workers who have in the past carried on the nation's hard labor. The sons of laboring men now go to high school or college, and in addition to the actual schooling received, they have gained the knowledge that there is an easier way to earn a living than the labor of hard work such as nursery operations require.

Looking over the laborers at any nursery today, one finds that, on the whole, nurseries at the present time have failed to attract any young men, the average age of laborers being somewhat higher than that of some less tedious industry. These are the simple facts which, while not incapable of solution, require recognition and a plan to cope with the present trend.

There are certain advantages which attract workers to any type of employment. The wage scale, the number of work hours, the extra benefits in the form of security in sickness and old age and the prospect of steady

employment all come in for consideration.

Particularly among younger men there is a tendency to favor jobs which operate under the benefits of the social security laws. Any future plan to extend these benefits to agricultural workers may be helpful in the long run to nursery employers.

Many nurseries fail to take advantage of laborsaving devices. It is necessary to give increasing attention to certain operations in nursery work which can be performed more easily by mechanical means. The elimination of heavy lifting and the substitution of motor power for horse-drawn vehicles will attract younger men.

As all nurserymen know, nursery work is seasonal, being somewhat more arduous during the busy periods. Some plan whereby workers might be assured of a regular wage on an annual basis, rather than be subject to the periods of increased or decreased earnings which now prevail, would be attractive.

Many nurseries have already plans in operation with regard to vacation periods, sick benefits and pensions. The time has come when we can no longer put off the establishment of some of these benefits. Until the nursery trade begins to provide benefits in keeping with those offered by other industries, it will be an increasingly difficult task to attract young men into our employ.

Nursery work, on the other hand, has many aspects which appeal to young men, particularly returning servicemen, who have during their war experience become accustomed to rigorous outdoor life. Many of these men would like to become engaged in nursery work, but cannot afford to do so unless other benefits are more or less in keeping with those of other industries.

L. L.

### EMPLOYMENT.

During the month of July, according to the census bureau, 60,730,000 Americans were profitably employed, including 2,600,000 in the armed forces. Civilian employment stood at 58,130,000. The goal set by Secretary of Commerce Henry Wallace—an America with 60,000,000 people on pay rolls—was exceeded by nearly three quarters of a million. Unemployed, including those moving from one job to another, numbered 2,270,000. The latter figure probably

has shrunk since the census bureau collected its data. John D. Small, civilian production administrator, noting that release of men from the armed forces will average only 100,000 per month from now on, compared with 600,000 monthly from January through June, sees an acute labor shortage ahead.

Small's report included the following observations: "The demand for labor in the remaining months of 1946 will be large, if, as it now appears, the country's production continues to rise. This demand will have to be filled from a depleted labor pool amounting to less than 4,000,000 workers. Manufacturing and construction activity, for instance, will each require a million additional workers during the next six months. In addition, the labor needs of the service and distributive trades still are far from satisfied, and it is doubtful whether unemployment can be cut much below 2,000,000 due to the shifting of workers from one job to another as well to the existence of submarginal workers for whom employment opportunities are limited.

"Thus the prospects are that business will (1) have to recruit back into the labor force large numbers of those who have left it since V-J day and (2) require that large amounts of overtime be worked if production schedules are to be met."

### PLANT REGISTRATION.

Comment appears in an English nursery periodical on the important news that the Royal Horticultural Society has accepted in principle the trade proposals for the registration of plants of garden origin and intends to begin the work as soon as possible. The Royal Horticultural Society will increase its staff for this work, which will be heavy.

The sooner some organization is formed to assume the work of plant registration in the United States, the easier the task of compilation of plant names will be, to ease the problems of nomenclature and synonyms for catalog compilers and others who have to do with the multiplying novelties in garden plants.

PETER CASCIO, president of the New England Nurserymen's Association, was one of three speakers on the "This Is Your Business" program of the Citizens of New England series over radio station WHDH August 5.



# The Great Plains Shelterbelt

By Joseph H. Stoeckeler

Most nurserymen will probably remember the Great Plains shelterbelt project, which was initiated as an unemployment relief project during the drought years of the mid-thirties. The plantings were started in 1935, and work continued until 1942. The project was administered by the United States Forest Service. The labor used consisted of men and women on WPA. A large amount of nursery stock was purchased from commercial nurseries, or grown on land leased from them by the government. Some was grown in government-owned nurseries. As such, the project gave a boost to the commercial nursery trade in the Great Plains at a time when this drought-stricken area was a rather poor market for the nurseryman.

The plantings were concentrated in a zone about 100 miles wide extending from North Dakota to northern Texas. The so-called shelterbelt zone roughly paralleled the 99th meridian of longitude. If you pick up a map and draw a line connecting the following cities you will have a good idea of where the area is located: Devils Lake, N. D.; Mitchell, S. D.; Kearney, Neb.; Pratt, Kan.; Mangum, Okla., and Vernon, Texas. This zone was selected on the basis of a survey of existing tree plantings and the soils and agricultural economy of the area. Here was an area where there was a wind erosion problem. Moreover, trees planted as shelterbelts on agricultural fields in this area attained sufficient survival, height and longevity to give promise of real value in aiding the agriculture of the area.

When the project was first proposed there was considerable adverse criticism, chiefly from people living farthest from the area, usually on the east or west coast. The stock argument was that, of course, this Great Plains area was a naturally treeless area, so why waste money planting trees? Others said it was all "submarginal for agriculture" and that it should be depopulated and put into buffalo grass and used for large ranches. The more facetious were for "giving it back to the Indians." The nurserymen in the area, of course, knew these arguments were poppycock and almost

unanimously backed the tree-planting project. After all, they had been in the business of growing trees for decades and knew very well that trees can be grown in this section. They knew that certain precautions were necessary, including proper selection of species, good ground preparation and planting, fencing to exclude livestock, and—most important of all—good cultivation for a period of at least five years.

In spite of the carping of critics, the project got under way and in the period 1935 to 1942 some 18,600 lineal miles of shelterbelt were planted, usually of five to ten rows in width. Belts were usually one-fourth to one mile long and placed at or nearly at right angles to the most damaging winds. Many belts contained one and sometimes two rows of evergreens. The remainder consisted of deciduous trees and shrubs. Some belts had fewer than five and a small percentage had over ten rows. The area planted was 238,000 acres and this required 220,000,000 trees. The plantings were made on privately owned farm lands, preference being given to those where there was a wind erosion problem. The farmer or owner plowed and prepared the land, furnished fence material and cultivated the trees. The government furnished the trees and planted the trees with labor furnished by people on unemployment and drought relief rolls.

The stock planted was 1 or 2-year-old seedlings of deciduous species

and 2 to 4-year-old transplants of evergreens. Four to five years of cultivation were expected of the farmer. No artificial watering was done except in a very few cases and this largely on the initiative of the land owner himself.

Now that the plantings are 4 to 11 years old, it may be well to take stock of the situation and find out what happened. In the summer of 1944 a survey was made by E. N. Munns, of the Forest Service, Washington, D. C., and the writer to determine results of the plantings. Some 1,072 shelterbelts were examined in detail.

Since these results may be of interest or value to nurserymen, especially in the midwest, the highlights will be brought out here.

On the whole, the plantings had better survival and growth than were expected, and the tree belt project must certainly be rated as a success. True, a certain percentage of failures occurred—some due to adverse conditions such as the bad drought of 1936, others to errors in judgment or care of plantations. When the United States Forest Service stepped into the role of technical and administrative director, it did not expect a 100 per cent success on this project.

## Relative Success of Belts.

For the area as a whole 58.1 per cent of the belts were rated as excellent, 20.3 per cent as good, 11.2 per cent as fair and 10.4 per cent as definitely unsatisfactory. Considering only belts rated as fair or bet-



A tree belt with unusual growth in shortleaf pine. The trees here are 10 years old and eighteen feet tall, in Greer county, Oklahoma.

Joseph H. Stoeckeler is at the Lake States forest experiment station, University Farm, St. Paul, Minn. Photographs supplied by the United States Forest Service.

Table 1.—Survival and Growth of Tall and Intermediate Deciduous Trees.

Species	Average survival per cent	Average height growth per year feet	Where planted most extensively
1. White willow*	86.7	2.4	North Dakota
2. Box elder	85.0	1.6	North Dakota, South Dakota
3. Tree of heaven*	81.9	2.4	Kansas
4. Honey locust	79.0	1.6	South Dakota to Texas
5. Black locust	78.3	2.3	Nebraska to Texas
6. Hardy catalpa	76.2	1.6	Nebraska to Texas
7. Sycamore*	75.4	2.8	Texas
8. Green ash	74.8	1.3	North Dakota to Texas
9. Chinese elm	70.5	2.3	North Dakota to Texas
10. American elm	69.1	1.4	North Dakota to Kansas
11. Hackberry	67.3	1.3	North Dakota to Texas
12. Coffee tree*	66.2	1.0	Kansas
13. Black walnut	65.9	1.0	Nebraska to Texas
14. Cottonwood	59.4	2.9	North Dakota to Texas
15. Bur oak*	57.9	0.8	South Dakota to Oklahoma
16. Soapberry*	51.2	0.8	Oklahoma, Texas
17. Apricot	46.9	1.4	Nebraska to Texas

\* Number of observations was small; not planted extensively.

ter as being satisfactory, the rating by states was as follows, based on the survival, growth and continuity of the belt:

Kansas, 94.8 per cent.  
Nebraska, 93.2 per cent.  
Oklahoma, 85.2 per cent.  
Texas, 94 per cent.  
North Dakota, 88.6 per cent.  
South Dakota, 83.4 per cent.

#### Survival and Growth.

The survival and growth rate by species is given in tables 1, 2 and 3. The tables are based on grand averages of fifty to 1,000 or more rows for most species. Species that were not planted extensively are shown by a coded footnote.

Certain species were planted only on rather favorable sites, for instance white willow and sycamore, and not many rows were available for observation; hence, the ratings in terms of survival must be considered in their proper light. If all the small sample species were disregarded and the remaining species left in order of decreasing survival, the tables would then give a rather good rating as to the ease of establishment and the ability of the different species to survive on the general run of upland farm soils in the Great Plains.

By this criterion it is seen (table 1) that box elder, honey locust, black locust, catalpa, green ash and Chinese elm rank high, while black walnut, cottonwood and apricot rank low. Apricot is supposed to be a hardy species. This is probably true as regards drought hardiness, but it was often observed to freeze out from central Kansas northward, and this probably accounts for the low survival. Cottonwood failed in many cases because of lack of moisture, or disease and insect pests. Sycamore appears to be a promising species and

could well be used more extensively in the future on deep sandy loam soils or moist sites from Nebraska southward.

The growth rate of the various species exceeded expectations. The shelterbelts, now about 7 years of age, averaged sixteen feet in height in North Dakota, twenty feet in Nebraska and twenty-four feet in Texas. In the southern Great Plains some of the belts from 7 to 10 years of age averaged from twenty-five to forty feet in height and a few were fifty feet high.

Among the evergreens (table 2) the eastern red cedar and Rocky Mountain juniper were outstanding. They were the only conifers planted on a large scale which gave satisfactory results. They were satisfactory in all states and outstanding in Kansas. The only areas where ponderosa pine made a fairly good showing were in the state of Nebraska and in parts of Kansas and eastern South Dakota, where rainfall was generally better than in the shelterbelt zone as a whole. Its low survival is attributed largely to inability of bare-rooted stock to get established. Once it has survived for sev-

eral years it is a tough, drought-hardy plant.

Rather striking growth rates were obtained in loblolly and shortleaf pine, and it would appear that more nurserymen in the southern Great Plains may find these species worth trying out, especially since with balled and burlapped stock survivals would be higher.

By selection of seed sources from the most westerly part of its range and from the same general latitude as the planting site, the writer believes that shortleaf pine may have considerable value in shelterbelt and landscape planting from central Kansas to Texas. With loblolly pine there is some prospect of success in Oklahoma and Texas. It may be of interest to nurserymen that these pines are reported to be growing successfully in an arboretum at Belle Plaine, about thirty-five miles south of Wichita, Kan.

Among the shrubs (table 3) or species used in exterior rows of the shelterbelts, the outstanding species were honeysuckle, caragana, wild plum, mulberry, Osage orange, chokecherry and tamarix. Many of these species have advanced enough in growth rate to produce flowers and as such have a high aesthetic value, notably honeysuckle, tamarix, lilac and redbud. The wild plum and chokecherry have been particularly popular because of good yields of wild fruit used by farm wives for jellies and preserves.

The survivals in tables 1 to 3 inclusive may not seem especially good to nurserymen, but since the trees were spaced rather close (average about 6x8 feet) the stands obtained were usually good enough so that an effective shelterbelt was created. Many belts with an average survival of only sixty per cent are quite effective as shelterbelts. In this respect the plantings were different from a landscaping job, where every tree or

Table 2.—Survival and Growth of Evergreens.

Species	Average survival per cent	Average height growth per year feet	Where planted most extensively
1. Ashe juniper*	90.0	0.5	Oklahoma
2. Jack pine*	85.0	1.0	Nebraska
3. Eastern red cedar	71.8	0.9	South Dakota to Texas
4. Scotch pine*	70.0	0.7	Nebraska
5. Rocky Mountain juniper	67.0	0.7	North Dakota to Texas
6. Austrian pine	44.1	0.7	Nebraska to Oklahoma
7. Black Hills spruce*	43.8	0.3	North Dakota, South Dakota
8. Loblolly pine*	40.0	2.5	Texas
9. Ponderosa pine	39.2	0.6	North Dakota to Kansas
10. Colorado blue spruce*	37.2	0.9	North Dakota, South Dakota
11. Shortleaf pine*	29.4	1.5	Oklahoma

\* Number of observations was small; not planted extensively.

shrub has a specific function to serve and must be replaced if it fails.

It will be well to bear in mind that in shelterbelt planting projects rather small bare-rooted stock was used and that planting had to be done by relief crews which had considerable turnover in personnel.

#### Importance of Cultivation.

Cultivation proved to be the most important single factor in success or failure of the tree belts. On 293 belts on which rather accurate data on care were available, it was found that 100 per cent of the belts receiving excellent or good care were in good condition as regards survival and growth. In belts receiving fair care only eighty-seven per cent were satisfactory; among those receiving poor care only seventy-three per cent were reasonably satisfactory as regards survival and growth.

Of all the belts planted, 10.4 per cent are considered unsatisfactory, largely as a result of poor cultivation. These belts are full of weeds and are an eyesore on the landscape. Some have already been plowed under.

Weediness in the belts was due to lack of help during the war and to some extent dwindling interest on the part of a minority of farmers who wanted trees but failed to push their interest to the point of doing a satisfactory cultivation job. Fortunately a large majority of the farmers maintained real interest and did their best to continue cultivation of the belts for four or five years after planting.

#### Other Problems.

A problem that is rather perturbing is the tendency of some farmers to turn livestock into the belts, so that cattle can take advantage of the shade. Of all the belts examined, 8.1 per cent had some evidence of cattle damage. It was worst in Oklahoma (19.2 per cent) and least in North Dakota (2.4 per cent). The damage may be due either to breakage, trampling or browsing of the trees themselves, or packing of the soil and its resultant reduction in ability to soak up rainfall. It appears that state extension agencies have an important job cut out for themselves in dramatizing the damage of livestock to the tree belts and the necessity of maintaining fences in situations where cattle may get into the trees.

The most serious and obvious failure of any single species was in cottonwood, especially in northeastern South Dakota. It failed rather generally in all states when planted on the drier sites and on those areas with tight impermeable subsoils. Unfavor-



A single-row 9-year-old shelterbelt planted under supervision of the Lake States forest experiment station. The cottonwoods here are forty-five feet high, in Beckham county, Oklahoma.

able weather conditions and several insect and disease pests aggravated the losses in cottonwood. The use of cottonwood should be drastically restricted in future plantings in the area under discussion and ought to be generally limited to deep sandy soils and with a maximum of one or two rows in a 10-row belt. When planted next to Chinese elm on sites with unfavorable moisture relations, cottonwood sometimes showed heavy losses due to the competition for moisture by the vigorous root system of the elm.

Rabbits have been a perennial problem, but a systematic hunting and poison control program carefully supervised by control experts of the

Fish and Wildlife Service has done much to keep damage down to reasonable limits.

The worst insect pests observed were twig girdlers on honey locust south of the latitude of Shamrock, Tex.; borers in ash, cottonwood and black locust in the entire shelterbelt zone; tent caterpillars on Chinese elm in the Dakotas; leaf beetles on cottonwood in the Dakotas; blister beetles on caragana in the Dakotas; bagworms on cedar or juniper in Oklahoma; tip moth damage on ponderosa and Scotch pine in Nebraska, and webworms on chokecherry from North Dakota to Nebraska.

The most serious disease problems

Table 3.—Survival and Growth of Species Used as Outside or Shrub Rows.

Species	Average survival per cent	Average height growth per year feet	Where planted most extensively
1. Honeysuckle	79.2	0.9	North Dakota, South Dakota
2. Sand plum*	75.0	0.7	Kansas, Oklahoma, Texas
3. Caragana	73.2	0.5	North Dakota, South Dakota
4. Wild plum	72.5	1.0	North Dakota to Kansas
5. Golden willow*	71.8	1.8	North Dakota, South Dakota
6. Mulberry	70.7	1.4	Kansas to Texas
7. Osage orange	67.6	1.2	Kansas to Texas
8. Chokecherry	67.3	0.9	North Dakota to Nebraska
9. Tamarix	66.5	1.5	Kansas to Texas
10. Desert willow	63.3	1.3	Kansas to Texas
11. Quail bush	59.6	0.6	Kansas to Texas
12. Lilac	59.6	0.5	North Dakota to Nebraska
13. Russian olive	58.7	1.3	North Dakota to Texas
14. Buckthorn*	56.2	0.7	North Dakota, South Dakota
15. Buffalo berry*	55.0	0.9	North Dakota, South Dakota
16. Redbud*	53.3	1.0	Kansas to Texas

\* Number of observations was small; not planted extensively.



observed were cytospora canker and wetwood wilt disease on cottonwood. In localized areas damage has been serious.

Mention is made of these because they may spread to ornamentals, highway plantings or even nurseries, and hence nurserymen have a direct interest in their control.

#### Benefits Derived to Date.

1. The belts are already effective in reducing wind erosion and protecting crops.

2. Some belts have been thinned for fence posts, notably black locust in Oklahoma.

3. The countryside has been immeasurably improved by the long strips of green trees in an otherwise rather monotonous landscape.

4. Some measure of highway beautification has indirectly been accomplished where belts parallel the roads and where flowering shrubs were used to flank the tree belts.

5. In the more northern states the belts serve as living snow fences and protect highways and roads.

6. The belts in some cases furnish protection to farmsteads, gardens, orchards and feed lots.

7. They are excellent havens for upland game birds, such as pheasants, and furnish a nesting place for many species of useful birds.

8. The belts have in some cases brought new districts into the soil conservation program.

9. The program has taught a whole new generation the art of tree planting. It involved tens of thousands of individuals. This knowledge is bound to be reflected in increased sales of trees and shrubs by the commercial nursery trade in this area. It has made people more tree-minded—townspeople as well as farmers. It has proved that outstand-

ing success can be had if the job is done right and if adequate care is given.

#### Research Needs for Future.

There is an urgent need in the future for a research center in the Great Plains where problems of tree planting can be studied systematically and a check kept on the progress and needs of the tree belts.

The scope of work should include research on the planting, care, management, thinning, pruning and replacement of shelterbelts, farm wood lots and other tree plantings. The work ought to include nursery research involving fertilization, watering, root and top pruning, use of plant hormones and other growth-promoting substances, use of cover crops, control of damping-off and other diseases, and insect control. It could well act as a central reporting and clearing agency on diseases and insects on tree plantings in the plains area.

#### JUDGES SELECTED FOR PLANS CONTEST.

The contest for the regional prize competition for designs of small home grounds closes at midnight September 5.

The judges selected to award the twenty cash prizes of \$50 each and the grand prize of \$200 are as follows: Zone 1—W. T. Christianson, Christianson Landscape Service, Fargo, N. D.; Scott Wilmore, W. W. Wilmore Nurseries, Denver, Colo.; H. S. Reid, chairman, Holmes & Olson, Inc., St. Paul, Minn.

Zone 2—Charles Fiore, Charles Fiore Nurseries, Prairie View, Ill.; Gerald Nelson, Swain Nelson Co., Glenview, Ill.; Vernon Marshall, chairman, Marshall's Nurseries, Arlington, Nebraska.

Zone 3—Peter Cascio, Peter Cascio

Nursery, West Hartford, Conn.; Louis Wissenbach, Squirrel Hill Nursery, Pittsburgh, Pa.; Clarence Siebenthaler, chairman, Siebenthaler Co., Dayton, O.

Zone 4—Walter Nisley, Walter Nisley & Walter, Inc., Harrisburg, Pa.; Juel L. Christensen, Christensen Nursery Co., San Francisco, Cal.; Owen Wood, chairman, Wood-Howell Nurseries, Inc., Bristol, Va.

Zone 5—Richard Westcott, Paul J. Howard's California Flowerland, Los Angeles, Cal.; Florida Nursery & Landscape Co., Leesburg, Fla.; Waldo Scott, chairman, Armstrong Nurseries, Inc., Ontario, Cal.

These judges were selected from the membership of the National Landscape Nurserymen's Association. The chairman of each of the regional zones will act in selecting the grand prize plan.

The need for the type of material to be collected from this competition is signified by the great interest that has been shown in the contest. Completed plans and any inquiries concerning the contest should be addressed to Harold E. Hunziker, contest adviser, P. O. Box 313, Niles, Mich.

#### SWAIN NELSON OFFICERS.

A new board of directors was elected by the stockholders of the Swain Nelson Co., manufacturers and landscape architects, Glenview, Ill., at a special meeting held July 26. The new board includes: Hubert S. Nelson, Glenview, chairman of the board and president; W. Russell Arrington, Chicago, vice-president and general counsel; Walter B. Colby, Northbrook, vice-president and general sales manager; G. A. Gundstrom, Glenview, vice-president in charge of the landscape division and treasurer of the company; Raymond A. LaCroix, Northfield, vice-president in charge of the Nydar division; John B. Miles, Golf, vice-president in charge of research and engineering, and Gerald F. Nelson, Glenview, vice-president in charge of the real estate division.

#### SOCIAL SECURITY CHANGES.

Increased federal aid to the states and the freezing of the pay roll tax rate at one per cent each on employer and employee were social security amendments agreed to by both houses of Congress in the closing days of the past session. Had no action been taken, the pay roll tax for old age benefits would have increased to two and one-half per cent on both employer and employee next January.



A fine 10-row shelterbelt in Reno county, Kansas. The trees are 8 years old, and the belt is thirty-five feet high. It is already giving protection to the recently seeded wheat.



# Inspect New York Experiment Stations

By A. M. S. Pridham

Approximately eighty nurserymen attended the 3-day meeting of the New York State Nurserymen's Association, which included a business meeting; demonstrations presented in cooperation with the department of floriculture and ornamental horticulture at Cornell University, Ithaca, August 15; inspection of experimental work being done on nursery problems at the Geneva experiment station, August 16, and a tour of Rochester parks, August 17.

The first demonstration at the August 15 meeting was given by Dr. F. B. Wright, of the department of agricultural engineering. Methods of weed control by means of a flame gun and a Sizz weed burner were shown. The latter is a large burner operated on propane gas and mounted in back of a tractor, doing at least two rows on a run. Both annual weeds and grasses in corn are controlled by the use of this equipment.

The flame gun, which can be operated quickly by one man, is relatively efficient among shrubs in a border. Dr. Wright demonstrated the gun under these circumstances and pointed out results of weed burning done a day or two before the meeting. Both small weeds of the purslane type and quack grass were satisfactorily killed by every flaming. The effectiveness of the flame gun was illustrated by freedom of corn rows from weeds of the grass type in one area of the field and of the broad-leaved type in another area. The hand-type burner is manufactured by the Hauck Co., Brooklyn, N. Y., and indications are that it will be useful for the control of weeds in deciduous blocks and probably for the control of weeds in shrubbery.

All these weed control devices have their limitations. The weed burner is based on the principle that, if the surface of the soil is not disturbed and once all the young seedlings are killed that are likely to germinate from weed seeds, the soil will remain free of weeds for the summer. Three burnings are usually enough.

Both the flame gun and the Sizz weed burner have been tested on nursery stock, with some promise of effective weed control with deciduous shrubs, but considerable injury to evergreens, particularly taxus, boxwood and similar plants. Professor Wright particularly stressed the importance of flaming weeds when they are small. Large weeds are much more

difficult to kill, and some serious injury to the crop may result.

The effectiveness of 2,4-D weed control was demonstrated by Dr. A. M. S. Pridham, of the department of floriculture and ornamental horticulture. Nurserymen inspected special grass plots that were treated immediately after the grass seeds had been sown. In one instance, heavy rains immediately after the application of the 2,4-D nullified its effectiveness in this plot. However, when applied later to a second area during dry weather, 2,4-D effectively controlled the weeds and killed the grass in the treated plots. In untreated plots grass grew normally and so did both broad-leaved and grasslike weeds, such as crab grass, barnyard grass and foxtail grass.

Applications of 2,4-D have been found to prevent the germination of seeds and the growth of seedlings. In order to gain control of common weed seeds, including annual grasses, five times the usual concentration of 2,4-D is necessary. This amounts to one-half of one per cent solution and can be used at the rate of 200 gallons to the acre.

2,4-D was applied in amounts ranging from the usual one-tenth of one per cent solution used at 200 gallons to the acre up to as much as one-half of one per cent. At this concentration practically all of the grasses, including the lawn grass and the weeds, as well as broad-leaved weeds, were killed. Treatment was made in May, and by August no weed growth was evident in these plots.

In a second series the concentration of the 2,4-D applied ranged from the usual one-tenth of one per cent solution up to as much as a five per cent solution. In concentrations of more than one-half of one per cent solution no weed growth was evident in the plots. Check areas contained quack grass, crab grass and other annuals as well as broad-leaved weeds.

In a third series of plots soil was prepared in late July, leveled and made ready for planting; 2,4-D was applied in concentrations ranging from one-half of one per cent up to one and one-half per cent at the rate of 200 gallons to the acre. After the application of 2,4-D taxus plants were inserted in the plots, and beans and oats were planted. As in the previous plots, a one per cent solution of 2,4-D prevented weed growth and did not injure the taxus, but results must be

regarded as preliminary. Check plots indicated abundant growth of quack grass as well as satisfactory growth of the evergreens, and of the beans, oats and other test plants that were used.

A high-pressure steam jenny manufactured by the Homestead Valve Co., Homestead, Pa., and the Buffalo turbine sprayer-duster were demonstrated by Dr. William Blauvelt, of the department of entomology. These pieces of equipment offer new methods of applying dusts and sprays at high speed over large areas, but are pretty largely dependent on weather conditions for satisfactory coverage. Dr. Blauvelt urged nurserymen to follow the development of these new methods of application.

## Geneva Experiment Station.

The second day of the meeting of the New York State Nurserymen's Association opened at Geneva at 10 o'clock in the morning. About seventy-five nurserymen gathered at Jordan hall to hear an address by Dr. A. J. Heinicke, director of the agricultural experiment station. Dr. Heinicke outlined the program of research under way on problems of production and storage of nursery stock and introduced members of the staff who were working on these projects.

Karl Brase, of the department of pomology, led a tour of the experimental work and explained the results of storing Lovell peach seeds from California over winter, and for longer periods, in dry storage; 1944 seeds germinated about thirty-seven per cent, while 1945 fall-planted seeds germinated forty-seven per cent. All produced uniform seedlings satisfactory for budding at the time of the meetings. Mr. Brase recommended fall planting rather than spring planting because of the unreliable results from the latter. Adequate moisture is essential for good germination, but freezing and thawing are not necessary. Afterripening, however, is important and appears to be necessary even in seedlings that have been raised by embryo culture, but have not had adequate afterripening before the embryo is removed from the seed and started on nutrient agar. The seedling growth is therefore abnormal until afterripening is past.

In the afternoon, the nurserymen visited the stool blocks for the dwarfing of understocks in apples. These included various East Malling under-

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# Michigan Summer Meeting

By Harold E. Hunziker, Secretary

Barney Ward's lively talk on "What We Saw, What We Heard and How We Felt at the Miami Beach A. A. N. Convention" made a good start for the varied program of the Michigan Association of Nurserymen's meeting August 16 at the Vincent hotel, Benton Harbor. Mr. Ward expressed the feeling of many when he said the train ride was one of the most enjoyable parts of the meeting. In addition to the great amount of work accomplished at Miami, he pointed out the opportunities given to see a water pageant, make trips on sight-seeing boats, go fishing and so forth. He mentioned the work of C. A. Boyer, chief of the state bureau of plant industry, in cooperation with the Michigan State College in bud certification work, which was cited at the Miami meeting. He told of the election of James Ilgenfritz, of Monroe, as A. A. N. executive committee-man from region 3.

A talk on "The Results of the First Year's Activities of the Nursery Training Course" was given by Prof. F. L. O'Rourke, director and counselor for this program at Michigan State College. He said he was glad to have the opportunity to tell about the course, because the Michigan Association of Nurserymen is sponsoring it. In order for the training course to bring good results, Professor O'Rourke said, the student must have an objective; if he is not sure of his objective, the student should not be advised to take a training course. Students taking 2-year training courses receive classroom schooling from September to March and work at nurseries from March to September. While the student is at the nursery he should have a variety of jobs, from hard, dirty work to plan-reading work. No partiality should be shown any student. However, Professor O'Rourke thought that improvement could be made in the student-employer relationship.

There has been much interest in the Michigan nursery training course. In fact, such a great interest has been shown that because of limited facilities, students will have to be carefully chosen to take the course. With a limit of thirty for the new course starting in September, sixteen will be second-year students.

Two additional association members were added to the educational committee assisting Professor O'Rourke. They are C. A. Boyer and

Bernard Ward, Lansing. Other members of the committee are R. W. Essig, Detroit; Martin Olsen, Detroit, and Arthur L. Watson, Grand Rapids. Dr. Roy E. Marshall, of the department of horticulture, Michigan State College, was called on, as the "father of training course," to make some remarks. He said that the college felt fortunate in having "Steve" O'Rourke, who has his heart and soul in the course, as its director.

Discussing his discovery of and visits to nurseries in the south Pacific, James Ilgenfritz, Monroe, gave a talk on "A Perspective of the Nursery Business While Away at War." He

associations which are helping so much in the business.

Donald Cation, of Michigan State College, was called upon to discuss the situation of stone-fruit diseases which led Michigan to begin in 1940 the program of budwood certification.

He told of the difficulty in recognizing the trouble and of the long incubation period before the diseases showed up on the trees. With care, careful indexing and more funds available the program can go forward, and Michigan can keep the lead.

After luncheon had been served to approximately seventy members and guests, W. R. O'Brien, of the United States Soil Conservation Service, aroused a great deal of interest in his talk on "Soil Conservation in the Nursery." So many persons, Mr. O'Brien stated, take so much valuable material from the soil and do not put any of it back that in an unbelievably short time the land is no longer usable for agriculture.

He supplemented his talk with enlarged photographs to show activities of wind and water erosion resulting from too much material's being taken from the soil without replacement made through soil practices designed to prevent this depleted condition. Some maps are already available, while others are being drawn up showing types of soil of the counties in Michigan and what can be done to improve them. These will be a great help in the soil conservation program for Michigan agriculturists.

Mr. O'Brien urged that nurserymen take a more active part in checking the places where orchards are to be planted. He said the nurserymen had "control of more land through their customers" and should take on this additional responsibility, which would result in better growing orchards and would reward the nurserymen with a better recommendation for the nurserymen's products.

Arthur L. Watson, Grand Rapids, acted as moderator for the quiz program. The quiz was carried on at a lively pace with nurserymen divided into teams. When the question could not be answered by one of the teams, members of the audience would be permitted to answer the question, thus winning a silver dollar. Louis Krill, of Vicksburg, won the final jackpot question with the nearest answer to the number of acres of nursery stock inspected in Michigan.

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served as a colonel and executive officer after entering the army in 1940.

Mr. Ilgenfritz found the nurseries of such Pacific islands and countries as Australia, New Guinea and Japan sadly lacking in maintenance, but he found the same condition in the United States upon his return. He said that he found much interest among foreign nurserymen in what was being done in the United States.

Mr. Ilgenfritz told of how he felt toward the veterans and of his resolve to give them as much encouragement as possible by hiring them and taking a personal interest in their efforts. He thinks that they can be a boon to his business and will probably be the ones who will be running the business in the future.

He expressed a desire to extend the nursery business and to "put it on the map" by stabilization of prices, intelligent buying and a greater activity in

# Bunch Host to Indiana Association

By R. Morgan Smith

Cool, rainy weather did not keep members of the Indiana Nurserymen's Association from attending the summer meeting held at Terre Haute, Wednesday, August 14. The J. C. Bunch & Son Nursery was host to the assemblage, which numbered 120. The large packing and shipping room for the new office, storage and shipping building, which is almost completed, afforded ample room for the gathering.

The weather cleared by afternoon, so that everyone was able to visit the Bunch nursery, which was in fine shape, and other points of interest. Those from the northern part of the state, where nurseries had suffered greatly from drought, were both glad for and envious of the thriving conditions of crops around Terre Haute. President Devol Ernst opened the meeting. The invocation was said by Floyd Bass, and Troy Bunch welcomed the group to Terre Haute. J. C. Bunch made a brief report on his trip to the American Association of Nurserymen convention held in July at Miami Beach, Fla.

A cafeteria lunch was served by J. C. Bunch & Son, tables being set in the shipping room. Those attending were asked to rise and identify themselves. Seven new members were introduced. Dr. J. J. Davis, head of the department of entomology at Purdue University, was accompanied by Dr. Laurenz Greene, Prof. J. A. McClintock and Prof. R. B. Hull, all of Purdue. Victor Judson, of Bristol, Ind., who is now harvest-

ing his early peach crop, traveled a long way to attend, as did many others from the northern part of the state. Although the drought in the north has been serious, Judson's strawberry crop has not suffered much because of a 40-acre irrigating system. He reported that peaches and apples were plentiful.

Paul Ulman, assistant state entomologist, introduced Dr. J. J. Davis, who spoke on "Nursery Insect Problems." In making the introduction, Mr. Ulman stated that Indiana nurserymen were not making so much use of the facilities at Purdue as they could. Dr. Davis said there was little research being done in the United States on nursery insect problems at present. He believes that prevention is the best control practice and that nurserymen should use farm methods of control before destructive agents ravage their stock. "You cannot control by a hit-or-miss program," said Dr. Davis. "Much research is needed in nursery work similar to the farm research programs." Purdue University has an orchard at Mitchell, Ind., where experiments are conducted on strawberries, peaches, apples and grapes. There is space there for a nursery which Dr. Davis hopes to see established. Purdue officials have mapped out an ecological research program whereby they will visit various nurseries to study their problems.

Dr. Davis said that borers are not so much a problem when trees are in the nursery as they are after the trees are set permanently, but leaf-eating

and sucking insects are a great menace. Sawflies, which slit the leaves and lay eggs, are bad. Damage by webworms is becoming worse, and tip moths are bad. Some nurserymen trim off the branch tips; others prefer to spray. Bagworms also have been doing much damage. To control bagworms, Dr. Davis advised spraying before the insects are half-grown. However, some have reported successful control of more-developed bagworms by spraying with arsenate of lead, eight pounds to 100 gallons of water.

Dr. Davis then discussed leaf-sucking insects and scale. For European elm scale, a five per cent solution of DDT has proved effective, if used early in July after the majority of the insects hatched. DDT is not effective on red spiders, but sulphur dust and summer oil sprays will control them. Some new materials are being tried out for red spiders that seem to be good.

White grubs are severe pests in plant beds. Crop rotation will help to eliminate them, as will grub proofing the ground with arsenate of lead, ten pounds to 1,000 square feet. This treatment involves some danger to broad-leaved evergreens, however.

Dr. Davis said no harm was done to soil treated with arsenate of lead. Old trees have been taken out and inspected, and corn crops also show no harmful effects.

Dr. Davis mentioned bark borers and said that, if trees affected were

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Summer Meeting of the Indiana Association of Nurserymen August 14 at J. C. Bunch & Son, Terre Haute.



# Instructive Talks at Virginia Meeting

By L. C. Chadwick

The Virginia Nurserymen's Association met at the Hotel Patrick Henry, Roanoke, Monday, August 12, for a full day's program. Since registration had been started the day before, a good crowd was on hand, and the meeting was opened promptly at 9 o'clock in the morning. Following the usual preliminaries, Richard H. Jones, Nashville, Tenn., president of the American Association of Nurserymen, reported on the recent national convention, at Miami, Beach, Fla., and discussed some of the business policies of the organization. He stressed particularly the importance of the public relations fund and said that the association has contributed \$2,000 to the American Pomological Society for a survey of fruit varieties. President Jones indicated that the membership in the A. A. N. now amounts to over 1,000, but this is a small proportion of the total number of approximately 11,000 nurserymen in the United States.

Fred Leissler, president of the Virginia Nurserymen's Association, reported briefly on the membership of the Virginia association and indicated that there had been an increase of over fifty per cent during the past year and that the membership now amounted to approximately eighty-five.

E. M. Quillen, Waynesboro, Va., reported on the newsletter issued by the Virginia Nurserymen's Association. He stressed its purpose and importance, showing that it had done much to build up membership in the organization. Following considerable discussion, it was decided to limit the circulation of the newsletter to members of the Virginia Nurserymen's Association.

The main talk of the morning session concerned the "Fertilization and Culture of Nursery Stock" and was made by Prof. L. C. Chadwick, of the department of horticulture, Ohio State University. Professor Chadwick discussed the importance of good soil management practices, if high-quality stock is to be produced. He discussed in some detail the structure of an ideal soil and stressed the importance of good aggregation in order to maintain proper air-moisture relationship. To get a proper aggregation it is advisable to maintain a high organic matter content in the soil by developing a systematic program of crop rotation in each nursery.

This rotation should keep the land

in soil improvement crops approximately one-third of the time. The soil improvement crops would consist of green manure crops, such as soybeans, Sudan grass, rye and vetch, and some permanent soil crops of grass mixtures containing timothy, bluegrass, alfalfa and red clover. The plowing down of a good sod will do as much for maintaining productivity of the soil as any procedure that can be followed. Professor Chadwick also mentioned the possibility of growing companion crops between the rows of nursery stock, particularly in shade tree blocks.

The question of fertilization was discussed in some detail, and the opinion expressed that the best place to apply fertilizer to the rotation was to the green manure and sod crops. Supplementary applications of fertilizers to the nursery stock could be given as the conditions necessitate. Providing the green manure and sod crops are well fertilized when they are sown and again when they are plowed under, it is probable that nursery stock which can be turned over in a few years will require little additional fertilization.

The soil conservation program in Virginia was discussed by S. W. Bondurant, assistant state conservationist, Blacksburg, Va. Mr. Bondurant discussed the federal program and Virginia's policies in soil conservation and ways in which nurserymen might cooperate with the program. Soil conservation districts have been established in eighty-five counties in Virginia, and \$200,000 are available for use in carrying out the program in these districts. The organization of soil conservation districts is up to the farmers and other interested persons in the counties.

Immediately after luncheon the election of officers for the coming year was held. New officers are: President, Bert Shoosmith; vice-president, John C. Coleman, and secretary-treasurer, A. S. Gresham, Jr.

The first discussion of the afternoon period was entitled "The Importance of Life Histories of Insects," presented by Dr. G. W. Underhill, associate entomologist with the Virginia agricultural experiment station, Blacksburg. Dr. Underhill discussed in some detail the life histories and control measures of the boxwood psyllid, the large elm leaf beetle and the sycamore leaf roller. Information was presented to indicate that the

boxwood psyllid could be controlled by dusting with one per cent nicotine dust or one per cent DDT dust the first or second week in June. A one to 400 nicotine spray could also be used as a control measure.

The large, or American elm leaf beetle has given trouble in some sections of Virginia, and the control measure suggested was banding the trees.

The sycamore leaf roller forms webs in the axles of the veins and causes the leaves to fold. The pest overwinters in the old leaves, and consequently one of the control measures suggested was the destruction of fallen leaves. Another control measure suggested consisted of spraying with DDT at the rate of two pounds of fifty per cent dust to 100 gallons of water. It also mentioned in passing that this same spray would also control lace bugs on sycamore and rose chafers.

C. R. Willey, assistant state entomologist, discussed the pest control program in Virginia. Mr. Willey emphasized the necessity of a thorough spraying job if pests were to be controlled in the nursery. Poor equipment and a haphazard job of application would not accomplish the desired results. He emphasized the importance of cooperation between nurserymen and the state department.

The afternoon final session consisted of a round-table discussion led by Professor Chadwick. Over an hour was spent in answering questions concerning the moving of coniferous evergreens bare root, the use of Transplantone in transplanting practices, the use of root-inducing substances and many other questions concerning the propagation and culture of nursery stock.

The enjoyable banquet in the evening was served at the Hotel Patrick Henry. The principal address of the evening was given by Harold E. Hunziker, Niles, Mich. Mr. Hunziker stressed some of the landscape policies being followed by industrial concerns and the importance of a greater amount of this type of beautification. The city of the future will have fine residential districts, well developed thoroughfares and industrial sections which are not a blight to the landscape.

Tuesday morning about thirty of the nurserymen inspected the new Virginia Polytechnic Institute horti-

[Concluded on page 43.]



# Developing Sales and Display Grounds

## PART VII - DISPLAY ARRANGEMENTS

By Harold E. Hunziker

The purpose of the display terraces is to display garden pottery, ornaments, garden tools, flats of annuals, potted plants and even boxed trees. Portable counters could also be used on the terraces that are broad enough (Fig. 12, July 15 issue). These terraces, extending from the sales building, tend to connect properly the building with the grounds. Some of these terraces are covered, to be more like pergolas, while others show an overhang or canvas roof (Figs. 8 and 9, July 15 issue). One suggestion was that the area for the terraces might be "flagged or bricked, using different patterns to give customers ideas of use for walks and terraces." Good surface drainage should be provided to take care of the frequent waterings necessary for plants on a display terrace. It is pointed out that by the use of these large terraces (for instance, Fig. 15, July 15 issue), maintenance can be kept down, since grass cutting would be eliminated.

Another example of paved areas for outdoor display is shown here in figure 21. (Elevation is shown in Fig. 8, July 15 issue.) Note also the covered loggia connecting the sales building with the greenhouse and

storage buildings. All terrace areas, connecting with the building, are covered with an overhang to shade the area and to allow outdoor selling on stormy days.

### Display Stands.

In the plan submitted by John Jennings, Short Hills, N. J., display stands, similar to low handstands, are placed on either side of his building for the display of seasonable plant material. These stands are close enough to the highway to be effective as a purely plant-merchandising idea (Fig. 22).

However, a more subtle scheme has been worked out by William Rowland, Bakersfield, Cal., for his ultra-modern setup. Mr. Rowland's plan provides for a display platform, which projects out in front of the line of his main building. Here he has portable sales units, "loaded with showy merchandise, to be wheeled onto the display platform; these bid for the trade of passing motorists. Other portable sales units offering novelty (highly profitable) merchandise greet customers at the front entrance."

The detail for the portable sales

unit with its adjustable sunshade is shown in Fig. 23. Space is provided underneath for sacks and extra pottery, etc.

### Indoor Displays.

Lath houses, if partly roofed, and sales buildings offer the usual indoor display areas for nursery stock and accessories.

Such items as garden and grass seeds, fertilizers, bulbs and insecticides must be merchandised from a sales building, where the items can be kept dry. Some argument might be had as to whether the sales room or rooms should look like the normal seed store, or whether, as one contestant says: "It is the feeling of this designer that the main 'display' or reception room be treated mainly as a salesroom and a place where the customers can sit if they desire. The counters and display could be kept at 'sample' minimum and the balance in storage." By this method, another designer points out, "displays will be neater and give the store a more spacious atmosphere." Possibly something between these two extremes would be about right for the

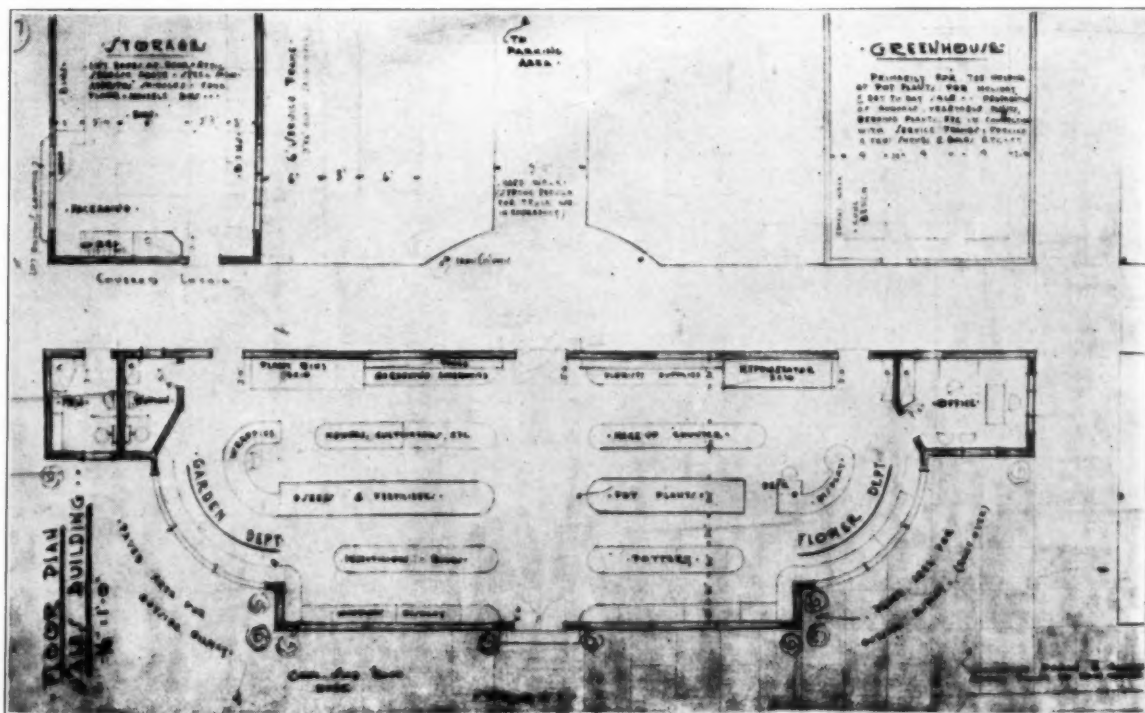


Figure 21. Here is the counter arrangement of the interesting modern sales building from the plan of R. J. Imlay, Zanesville, O. Note the paved areas for outside displays, covered by the building overhang.

nurseryman, who is, after all, mainly trying to encourage the sale of plant material.

A well arranged sales building is shown in the plan of R. J. Imlay (Fig. 21), to which we have referred several times before. Here good use has been made of the floor space, with ample aisles for circulation. This arrangement is what you might expect in the most modern hardware store. Other display arrangements in sales buildings will be found in Fig. 6, July 1 issue, and Figs. 11, 12 and 15, the July 15 issue.

Suitable benches and counters, similar to those found in most modern stores, would be desirable for the sales building. Spaces under the counters for storage would be a useful feature also. The wrapping area might well be at the back of the store, so that in receiving their merchandise, customers would pass by all the displays. Beneath the wrapping bench, peat moss, heavy paper and burlap might be kept. Wrapping paper should be handy, along with all small tools, to make wrapping and delivery of plants and accessories a speedy procedure.

In the plans drawn by Charles R. Markham, Elyria, O., there are some interesting details (Fig. 24). One is the colonial display on the wall of the lobby, with specialty displays at either side. This is to represent a flower show setup, which can be changed from time to time.

Also of special interest is the use of glass blocks for counters in the salesroom. For the modern interior, this should work out as an attractive feature.

#### Lighting.

Again we should bring in the importance of lighting of the display areas. Floodlights should be used to advantage on the display beds. Even small floodlights on each garden feature would be helpful in giving a sparkling night atmosphere, much like the fairs of the fall season. As noted before, lighting in connection with water displays is most effective at night.

During the study of the reports and plans, we have noted the special references made to merchandising ideas. These ideas have been grouped together to form the next installment of this series.

#### DAHLIA SITUATION.

An even smaller acreage in dahlias is forecast for the coming year by E. R. Ryno, proprietor of the Wayland Dahlia Gardens, Wayland, Mich., and chairman of the dahlia committee of the National Mail Order Nurserymen's Association. Although his own firm has increased its acreage to a total of seventy acres, yielding approximately a million plants, Mr. Ryno estimates that the total acreage in dahlias this season, taking the country as a whole, will

be at least twenty per cent less than last year's.

Scarcity and relative merit are determining factors in dahlia prices. Scarcity is chiefly reflected in the cut flower varieties, such as Jersey's Beauty, Jean Kerr, Le Toreador and Francis Larocco, which are in demand in large quantities by cut flower growers. These varieties used to sell by the thousands at from 3 to 5 cents apiece, but scarcity boosted these prices last year up to 15 to 25 cents. The fact that these prices held throughout the season shows pretty clearly that available stocks were moving even at the higher rates.

Regarding the second factor in dahlia price, relative merit, Mr. Ryno says: "When Jersey's Beauty will sell at 25 cents we cannot expect such varieties as Kathleen Norris, Victory and Premier's Winsome to sell at 10 cents. When Le Toreador and Francis Larocco will sell at 20 cents, certainly Mrs. Boutillier, California Idol and such varieties of greater merit cannot be bought for half that price."

Because of the expected scarcity of dahlia stock, Mr. Ryno does not look for any cut in the price of standard varieties and believes prices of larger garden and exhibition varieties will probably rise. To prevent unnecessary losses of stock and profits caused by freezing in transit, he suggests that all shipments be sent by express and be followed with an alert on the

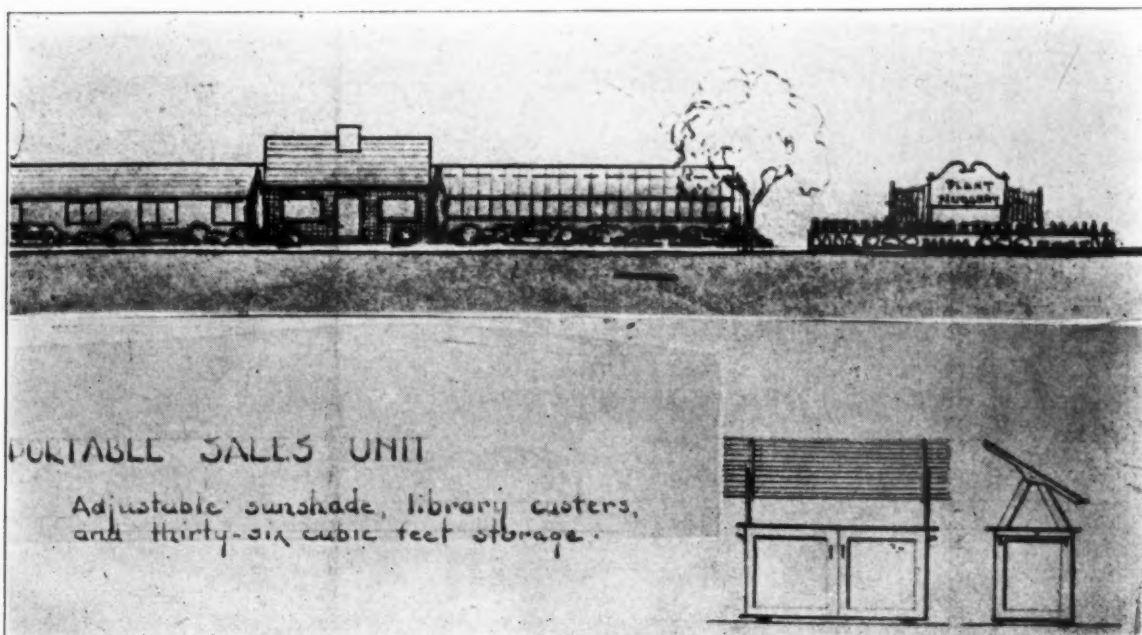


Figure 22. Above is the plant stand idea from the plan of John Jennings, Short Hills, N. J. This plant stand is located just off the public right of way.

Figure 23. Below is the detail of the interesting portable sales unit from the plan of William Rowland, Bakersfield, Cal. Mr. Rowland's plan received a mention from the judges.

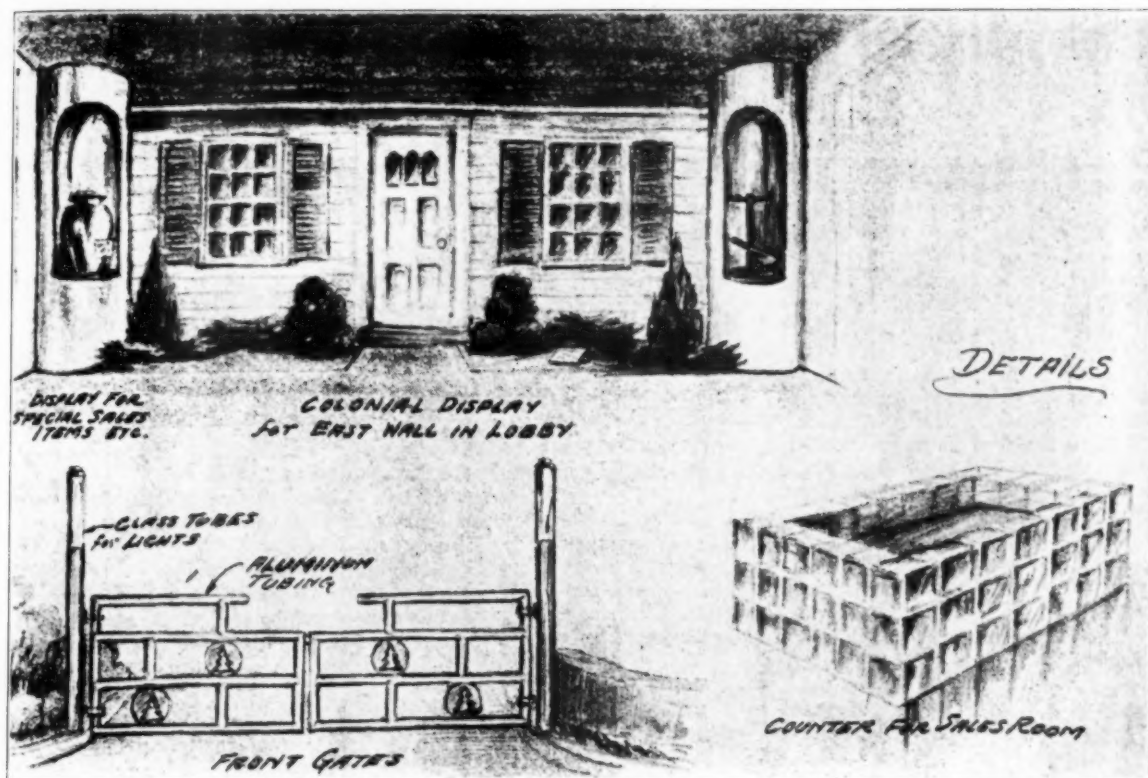


Figure 24. These details were taken from the plans of Charles R. Markham, Elyria, O. They show a lobby display area, aluminum tubing gate and a glass block counter. Mr. Markham's plan won a mention from the judges.

condition of the bulbs from the agent at the shipping point.

#### EXPECT QUARANTINE BILLS TO PASS 1947 CONGRESS.

Early consideration and favorable action in the next session of Congress, convening in January, 1947, are expected on quarantine amendment bills S-1990 and HR-6433. Although no action was taken during the recently adjourned Congress, the groundwork has been laid, and there is a large volume of congressional correspondence on file indicating general bipartisan support for the amendments proposed to the plant quarantine act of 1912.

The bill was introduced in the Senate, March 27, 1946, and a report requested from the Department of Agriculture. The delay in this department in preparing the report for the Senate committee on agriculture and forestry was a serious setback to early consideration of the bill, and it was late in May before it was finally cleared. The report, which Richard P. White, executive secretary of the American Association of Nurserymen, believes to be a favorable one, was sent to the budget bureau in order to secure concurrence from the executive branch of the government.

The Departments of State and Commerce objected on the basis that the bill, S-1990, was a barrier to international trade and not designed as a pest control measure.

During July, the A. A. N. made contacts with the White House and the budget bureau, and conferences between the Departments of Agriculture, State and Commerce were arranged which resulted in a meeting of viewpoints. A report will be sent to the Senate committee, even though the Congress has adjourned. Although certain amendments will probably be proposed, Secretary White believes they will be acceptable to regulatory officials and the nursery trade.

#### FREIGHT CARS.

Cars of all categories continue short. Loading of perishables continues high, and in order to conserve the available supply of refrigerators to protect the movement of perishable foods, several items have been denied the use of refrigerators. Total perishable loading from January 1 to June 29 is reported by the Association of American Railroads as 865,996 cars, compared to 820,316 cars during the corresponding period in 1945, or an increase of five and one-half

per cent. Some improvement is reported in the repair program, but indications are that refrigerators will continue short of demands for months to come. Shippers and receivers of nursery stock should request movement as early as possible this fall, states R. P. White, executive secretary of the American Association of Nurserymen.

#### VETS BUY TEXAS FIRM.

Hugh W. Robbins has been named assistant manager of the Phelan Floral & Nursery, Dallas, Tex., according to Richard W. and John A. Phelan, Jr., proprietors. The brothers recently purchased the business, which had been known as the B. E. Williams Floral & Nursery.

All three are ex-servicemen. After nearly four years of service, including a year in the European war theater, Hugh Robbins held the rank of major when he received his discharge in March. Both Richard and John Phelan served with the Fifteenth air force in Italy. Richard Phelan was separated from the army air forces as a first lieutenant after serving four and one-half years, and John Phelan served in the army three and one-half years, including eighteen months overseas as a sergeant. B. J.



# Southern Convention at Greensboro

*By W. C. Daniels, Secretary*

Greensboro, N. C., known as the gate city of the south, was host to the Southern Nurserymen's Association, August 6 to 8, on the occasion of its forty-sixth convention; 130 persons, the largest official registration in the association's history, attended the 3-day victory convention at the O'Henry hotel. It was the first meeting in two years, the 1945 gathering having been suspended because of travel restrictions.

New president of the association is Henry Homer Chase, Chase, Ala. Other officers are Donald Hastings, Atlanta, Ga., vice-president; Charles N. Morse, Chattanooga, Tenn., chairman of the executive committee, and W. C. Daniels, Charlotte, N. C., secretary-treasurer.

An informal smoker Tuesday evening, August 6, preceded the regular business sessions, the first of which was called to order at 10 a. m. August 7, by President Henry N. Boyd, McMinnville, Tenn. The invocation was said by Dr. Lambeth, district superintendent of the Methodist church, at Greensboro, and the welcoming address was made by Henry A. Yancey, Greensboro city manager. John B. Wight, Cairo, Ga., responded on behalf of the nurserymen.

In making his presidential address Mr. Boyd called attention to the dangers of overproduction and voiced the opinion that the next five years, at least, will be prosperous ones for the nursery industry. Walter E. Campbell, Greensboro, suggested that nurserymen cooperate more closely in the introduction of new dwarf-growing evergreens.

After the appointment of special committees by President Boyd, the report of the secretary-treasurer was given by W. C. Daniels, Charlotte, N. C., who reported a record membership of 126, with twenty-five new members added to the rolls during convention week. The treasury showed a balance of \$847.37.

Greetings from the American Association of Nurserymen were extended by its newly elected president, Richard H. Jones, Nashville, Tenn. On the program were addresses on "The Insect Situation in North Carolina for 1946," by C. H. Brannon, state entomologist, Raleigh, and "Accent on Selling," by an official of Sears Roebuck & Co.

Following luncheon in the hotel ballroom, Dr. Franklin H. McNutt, of Woman's College, Greensboro,

spoke on "What Is an American?" At the annual banquet, held that evening, Judge R. W. Smartt, McMinnville, Tenn., was toastmaster. The entertainment included a floor show provided by the Jerry O. Moore troupe, Charlotte, and musical numbers by Rosemary Johnson, Greenville, S. C., and Mrs. R. B. Taylor and Douglas Taylor, Greer, S. C.

At the final session, held Thursday morning, Charles Lamb, of the United States Soil Conservation Service, Spartanburg, S. C., illustrated his address on "Permanent Agriculture" with moving pictures. Henry Homer Chase, vice-president of the association, spoke. John T. Bregger, Clemson, S. C., associate secretary of the American Pomological Society, told of the survey of peach varieties, along the lines of his talk at the A. A. N. convention, reported in the August 1 issue.

Following a general discussion period, committee reports were given. It was suggested that the photographic committee, headed by Dr. G. M. Bentley, Knoxville, Tenn., should be

continued, in order to carry out plans curtailed during the war, which include setting up a library of color films showing methods of planting, landscape design and similar subjects. It was decided to hold the next meeting at Atlanta, Ga.

The women's auxiliary, headed by Mrs. W. C. Daniels, president, Charlotte, N. C., held a breakfast meeting August 8.

## INSECTICIDE CEILINGS.

Manufacturers' ceilings have been increased approximately ten per cent on lead arsenate and five per cent on Paris green, the Office of Price Administration announced last month.

Both increases, effective August 12, 1946, pass through to distributors and dealers the amount of recent increases granted on lead and copper, the principal raw materials used to make these fruit and vegetable spray ingredients. Retail prices of vegetables and fruit sprays put up in consumer-size packages will be raised about five per cent.

## SURPLUS PEACH AND APPLE STOCK

We still have a sizable amount of **June-bud Peach** in the following varieties, and at the present time can furnish these varieties in most all grades ranging in size from 6 to 12 ins. to 4 to 5 ft.: **Rochester, Early Elberta, Regular Elberta, Late Elberta, Brackett, Hale Haven, Red Haven, South Haven, J. H. Hale and Shipper's Late Red.**

We still have approximately **100,000 Year-old Apple** available for the wholesale trade.

Write for prices.

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**WELLER NURSERIES CO., Inc.**  
HOLLAND, MICHIGAN

*Weller's*  
*Perennials*  
with that  
Wonderful Root System

# PLANT WELLER'S HARDY PHLOX

EXCELLENT STOCK, WITH ALL ROOTS.

## ORDER NOW, WHILE VARIETY IS COMPLETE

FOR FALL DELIVERY. Shipment after October 1st.

FOR SPRING DELIVERY. We will reserve your order with 25 per cent deposit.

Our Phlox are strong field-grown plants with a fine bunch of uncut, strong, healthy roots. They are much better than divided old clumps. Terms: 30 days; 2 per cent in 10 days; 3 per cent for cash with order.

### PHLOX DECUSSATA (Hardy Phlox). Popular Varieties

	Per 10	Per 100
AMERICA. Rosy-pink; strong grower. 36-in. ....	\$1.75	\$12.00
ANNA COOK. Soft lilac-pink with faint carmine eye. ....	1.75	12.00
B. COMTE. Brilliant purple. 24-in. ....	1.75	12.00
BARON VON DEDEM. Brilliant orange-red. 24-in. ....	2.00	15.00
BEACON. Clear cherry-red. 36-in. ....	1.75	12.00
BRIDESMAID. White with crimson eye. 40-in. ....	1.75	12.00
CHAMPS ELYSEES. Dark purple. 24-in. ....	1.75	12.00
ECLAIREUR. Rosy-magenta. 32-in. ....	1.75	12.00
EUROPE. Pure white with carmine center. 40-in. ....	1.75	12.00
FIREBRAND. Clear orange-scarlet; very large. 36-in. ....	2.00	15.00
FRAU ANTON BUCHNER. Pure white. 32-in. ....	1.75	12.00
INDEPENDENCE. Pure white. 30-in. ....	1.75	12.00
JEANNE D'ARC. Pure white. 40-in. ....	1.75	12.00
LA VAGUE. Mauve-rose, with cherry-red center. 42-in. ....	1.75	12.00
LOUISE ABBEMA. Pure white. 20-in. ....	1.75	12.00
MRS. CHAS. DORR. Tall lavender. 42-in. ....	1.75	12.00
MRS. JENKINS. Pure white. 30-in. ....	1.75	12.00
MRS. R. P. STRUTHERS. Orange-red; the best. 36-in. ....	1.75	12.00
PANTHEON. Carmine-pink. 30-in. ....	1.75	12.00
PRIME MINISTER. White, crimson eye. 36-in. ....	1.75	12.00
RHEINLANDER. Salmon-pink. 32-in. ....	1.75	12.00
RIJNSTROOM. Deep pink. 48-in. ....	1.75	12.00
SIEBOLD. Orange-scarlet with crimson eye. 30-in. ....	2.00	15.00
SIR EDW. LANDSEER. Fine bright crimson. 32-in. ....	1.75	12.00
VON HOCHBERG. Black-red color. 42-in. ....	2.00	15.00
VON LASSBURG. Pure white; large. 28-in. ....	1.75	12.00
WHITE QUEEN. Pure white. 36-in. ....	1.75	12.00
WIDAR. Deep violet with white markings. 28-in. ....	2.00	15.00

### PHLOX (Various types)

	Per 10	Per 100
AMOENA. Bright pink. 6-in. May. ....	\$2.00	\$15.00
DIVARICATA LAPHAM. Lilac. 12-in. May. ....	2.25	17.50
SUBULATA ALBA (Creeping Moss). White. 4-in. May. ....	1.75	12.00
SUBULATA APFLEBLOSSOM. Fine appleblossom. 4-in. May. ....	2.00	15.00
SUBULATA ATROPURPUREA. Deep carmine-red. 4-in. May. ....	2.00	15.00
SUBULATA C. F. WILSON. Soft lavender. 4-in. May. ....	2.00	15.00
SUBULATA LILACINA. Blue variety. 4-in. May. ....	2.00	15.00
SUBULATA MOERHEIMI. Carmine-pink. Fine variety. 4-in. May. ....	2.00	15.00
SUBULATA ROSEA. Pink variety. 4-in. May. ....	1.75	12.00
SUBULATA VIVID. Bright pink with darker eye. 4-in. May. ....	2.25	17.50

### PHLOX DECUSSATA. Novelties; new and better varieties.

	Per 10	Per 100
Many of the following varieties are not new, but they are harder to produce in true, reliable stock and have been priced accordingly.		
AFRICA. A dazzling, deep scarlet; splendid. 30-in. ....	\$2.00	\$15.00

### PHLOX DECUSSATA—Cont.

	Per 10	Per 100
BORDER QUEEN. Improved Jules Sandeau. Enormous compact trusses of pure pink. 20-in. ....	\$2.00	\$15.00
BRILLIANT. Large trusses of fiery scarlet. 30-in. ....	2.00	15.00
CAROLINE VANDENBERG. A true lavender-blue. ....	2.00	15.00
DAILY SKETCH. Salmon-pink, vivid crimson eye. 3-ft. ....	2.00	15.00
E. I. FARRINGTON. Bright salmon and soft pink. ....	2.00	15.00
ENCHANTRESS. Bright salmon-pink, dark eye. ....	2.00	15.00
ETNA. Superb deep scarlet. 36-in. ....	2.00	15.00
FIANCEE. One of the best; pure white. ....	2.00	15.00
GENERAL PETAIN. Deep wine-red, well shaped. ....	2.00	15.00
GEORGE STIPP. A perfect deep glowing salmon with shaded lighter eye. ....	2.00	15.00
GRAF ZEPPELIN. White with vermilion-red eye. ....	2.00	15.00
GRANDEUR. White with deep rose. ....	2.00	15.00
H. B. MAY. Very large spikes of bright pink. ....	2.00	15.00
JULES SANDEAU. Compact trusses of pure pink. ....	2.00	15.00
LILLIAN. Beautiful salmon-pink, better than Elizabeth Campbell. Early and continuous bloomer. 24-in. ....	2.00	15.00
MORGENROOD. A beautiful new wine-red; very unusual and very striking. 30-in. ....	2.00	15.00
MRS. E. PRITCHARD. The best blue Phlox. 36-in. ....	2.00	15.00
MRS. SCHOLTEN. Dark salmon-pink, excellent. ....	2.00	15.00
NANA COERULEA. Mauve with starred center. Fine. 16-in. ....	2.00	15.00
NEW BIRD. Amaranth-red of great brilliance. ....	2.00	15.00
NORDLICHT. Large, carmine-pink with red eye. 36-in. ....	2.00	15.00
PAINTED LADY. Silvery pink salmon with red eye. 36-in. ....	2.00	15.00
PALADIN. Finest salmon-pink, red eye. Large. ....	2.00	15.00
PARACHUTE. Clear mauve. Excellent. 30-in. ....	2.00	15.00
P. D. WILLIAMS. Enormous appleblossom with darker stripes. 30-in. ....	2.00	15.00
PURPLE SWEETHEART (New). Reddish purple with deeper eye. ....	2.50	20.00
ROYAL PURPLE. The best deep blue. ....	2.00	15.00
SALMON GLOW. Flame-pink with salmon. ....	2.00	15.00
SILVERTONE (New). Beautiful lilac. ....	2.00	15.00
STARLIGHT. Violet-red shading to lilac. ....	2.00	15.00
WM. KESELRING. Large violet with white eye. ....	2.00	15.00
WORLD PEACE (New). There can be no better name for this beautiful Phlox. Its growth is as strong as we want Peace to be and its color as innocent and pure as we want our hearts to grow. A very strong grower, this Phlox has foliage like that of Miss Lingard, dark green glossy leaves, full of health and vigor, with enormous pure white flowers on strong sturdy stems, such as are unusual for a Phlox. ....	3.00	25.00

ASK FOR OUR COMPLETE CATALOG ON  
PERENNIALS AND WELLER'S HARDY BOXWOOD.

# Record Attendance at Shenandoah

By Clyde H. Heard

The summer meeting of the Iowa Nurserymen's Association was held at Shenandoah, August 7, with five local nursery and seed firms acting as hosts. There were Lake's Shenandoah Nurseries, J. C. Welch Nursery, Mount Arbor Nurseries, Henry Field Seed & Nursery Co. and Earl E. May Seed Co.

The advance guard arrived Tuesday evening, August 6, when 115 visiting nurserymen were treated to an excellent steak dinner at the American Legion Country Club. The Delmonico hotel, headquarters for overnight guests, was filled to capacity, and the hosts took care of the overflow. The double-deck bunks in the barracks at the Mount Arbor Nurseries were well used. The occupants were served from Mount Arbor's kitchen for Tuesday's luncheon and Wednesday's breakfast. A former instructor in the navy cooks' and bakers' school is manager of the commissary. The barracks have been used to house Mexican laborers. There are several small cabins near by, each accommodating three persons. Landscaping of the area has been begun. The Henry Field Seed & Nursery Co. and Lake's Shenandoah Nurseries also have several homes for their employees. Most of these cabins and small houses have been made from grain bins and are surprisingly attractive in appearance.

Headquarters for the visiting nurserymen was the Eskimo Club in the Mount Arbor storage house, sponsored by the five hosts. Decorations were tasteful, with an art background displaying igloos, penguins, polar bears, seals and a walrus with a wicked gleam in his eye. Refreshments were served, and Bob Bauge was chairman of the committee which arranged for musical entertainment.

Cars were available as soon as any desire was expressed to see the grounds of the various nursery firms, and tours of the nurseries were popular. A bulletin showing what to see and where to see it at each nursery was given the guests. Employees were on hand to explain and demonstrate the various pieces of equipment and nursery practices. Nurserymen had an opportunity to see shrubs, trees, evergreens, perennials, strawberries, rhubarb and asparagus in great quantities. Propagating equipment, overhead irrigation systems, greenhouses, machinery of all kinds and other items of interest were on display. Methods of handling orders,

streamlined almost to perfection, were demonstrated. A set of prize-winning plans for nursery display grounds from the National Landscape Nurserymen's Association was on display.

Of special interest in the Eskimo Club was a collection of Mount Arbor catalogs dating back to the 1890's. In a wholesale list for 1894, apples, five to six feet, were quoted at \$55 per thousand. There were fifty-four varieties of apples and ten varieties of crab apples from which to choose. Pears, five to six feet, in good assortment, were \$150 per thousand, and flowering almond, twelve to twenty-four inches, was \$8 per hundred. In 1902, pear whips, five to six feet, were 7½ cents each, and Jonathan apples, four to five feet, 3½ cents. The April, 1896, "Snaps and Surplus Stock," a single sheet, listed apples, five to six feet, at 3½ cents and cherries, five to six feet, at 6 cents. Labor was somewhat less expensive than today.

Vernon Marshall, in looking through some old letters in his files for 1897, came across one to William F. Cody, "Buffalo Bill," quoting ap-

ples and cherries for his ranch at North Platte at 9 cents each.

When dinner was served Wednesday at the country club, 235 nurserymen and guests were on hand to enjoy plates heaped with turkey, ham and pork. There was no formal program, but President Carl Baumhoefer introduced some of the visiting entomologists representing the Central States Plant Board and other officials. Among those from out of the state were R. M. Howard, director of agriculture, and L. M. Gates, state entomologist, Lincoln, Neb.; L. E. Adams, state entomologist, and Lester Davis, assistant state entomologist and field inspector, Jefferson City, Mo.; J. F. Randall, state entomologist, Pierre, S. D., and E. L. Chambers, state entomologist, Madison, Wis. Iowa guests included Harry Linn, state secretary of agriculture, Des Moines, and Carl J. Drake, state entomologist, and assistants Elmo Hardy, H. B. Green and J. L. Scoggins, of Ames.

The number of nurserymen attending  
[Concluded on page 43.]

## CANADA HEMLOCK

	Per 100	Per 1000
4 to 8-in. trans....	\$20.00	\$180.00
8 to 12-in. trans....	25.00	225.00
4 to 8-in. seedlings, collected .....		25.00
8 to 12-in. seedlings, collected .....		40.00

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Mastodon, Gem, Premier, Catakill, Pathfinder,  
finder, Temple and all other standard  
varieties.

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Willards, Md.

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20-25 YEARS OLD  
WELL SHEARED

30 CUSP. VERMEULEN.....\$40.00 to \$75.00 ea.  
Pyramid and other desired shapes.  
Heavy plants. 4½x4½ ft. to 6½x6ft.

10 MEDIA KELSEY.....\$75.00 ea.  
Broad, heavy, berry-bearing plants.  
Good form. 5x5 ft. to 7x6½ ft.

See them for yourself to appreciate  
them. Call me for directions from  
N. Y. C. Phone: Westbury 328. Plants  
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Prices are dug for pickup at nursery.

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Wholesale Nurserymen  
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in better evergreens and shrubs.

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We grow about 80 acres of peonies, digging each block when it is 3 years old. One carload customer tells us that we grow the finest peony roots in America. You can see that this is a fine list of high-rated varieties. Prices are for standard 3 to 5-eye divisions. F.O.B. Hamburg, Iowa, packing extra, except no packing charge for cash with order.

Rating		Per 10	Per 100	Per 1000
8.8	BALL O'COTTON. Late, white.....	\$4.50	\$40.00	\$375.00
7.6	EDULIS SUPERBA. Early, pink.....	4.00	35.00	300.00
8.9	ENCHANTRESS. Late, white.....	4.50	40.00	375.00
8.4	FELIX CROUSSE. Midseason, red.....	5.00	45.00	400.00
9.1	FRANCES WILLARD. Midseason, fine white.....	6.00	50.00	450.00
9.3	FRANKIE CURTIS. Midseason, white.....	6.00	55.00	500.00
8.56	GENE STRATTON PORTER. Midseason, pure white.....	6.00	50.00	450.00
8.9	GEORGIANA SHAYLOR. Midseason, fine pink.....	5.00	45.00	400.00
9.2	GRACE LOOMIS. Late, fine white.....	5.50	50.00	450.00
8.41	HARRY L. RICHARDSON. Best late red.....	5.00	45.00	400.00
8.9	JUBILEE. Midseason, very large white.....	5.00	45.00	400.00
9.0	KATHARINE HAVEMEYER. Midseason, pink.....	5.00	45.00	400.00
8.7	LADY KATE. Late, fine pink.....	6.00	55.00	500.00
9.0	LA FRANCE. Late, pink.....	5.00	45.00	400.00
8.95	LILLIAN GUMM. Midseason, pink.....	5.00	45.00	400.00
9.0	MARY B. VORIES. Late, fine white.....	6.00	55.00	500.00
9.0	MILTON HILL. Late, light pink.....	5.00	45.00	400.00
8.93	MINNIE SHAYLOR. Midseason, semidouble white.....	5.00	45.00	400.00
9.28	MRS. A. B. FRANKLIN. Late, fine white.....	7.50	65.00	550.00
9.0	MRS. FRANK BEACH. Late, white.....	6.50	60.00	550.00
7.7	PHILOMELE. Midseason, showy pink and yellow.....	4.00	35.00	300.00
8.8	PHOEBE CARY. Late, good pink.....	5.00	45.00	400.00
9.0	PHYLLIS KELWAY. Midseason, good pink.....	5.00	45.00	400.00
9.04	SILVIA SAUNDERS. Early, semidouble pink.....	6.00	55.00	500.00
9.27	SOLANGE—Late, creamy-buff.....	5.00	45.00	425.00
9.4	TOURANGELLE. Midseason, fine blush.....	5.00	45.00	425.00
8.5	WHITE SWAN. Midseason, white single.....	5.00	45.00	400.00
8.6	MIKADO. Midseason, most popular red Jap.....	5.00	45.00	400.00

## SASS PEONIES

The Sass Iris are world famous. Mr. Hans P. Sass has also created some very fine peonies. We confidently expect that as the years go by and people become acquainted with them they will find an important place in the peony world. Unfortunately our stock does not permit us to wholesale some of the Sass varieties like Carolyn Mae Nelson, Dr. Brethour, Elsa Sass, Evening Star, Elizabeth Huntington, Hans P. Sass, Queen of Hamburg and Thor. We believe that it will be a good investment to plant some of the following varieties. In our own fields we have about 500 peony varieties, and these Sass peonies have done exceptionally well with us.

	Per 10	Per 100
ANNA SASS. Late midseason, light pink. Large flowers on tall stems.....	\$ 5.00	\$ 40.00
CORAL QUEEN. Late, an exquisite blush with a faint rose suffusion. Large perfect flowers on strong upright stems.....	5.00	45.00
FLORENCE MacBETH. Late, dainty shell-pink.....	5.00	40.00
GRACE BATSON. Midseason, deep pink. Enormous flowers shaped like a huge chrysanthemum. A sensational flower.....	5.50	50.00
HERMIONE. Late, appleblossom—pink. Large flowers on tall strong stems. We like it much better than Sarah Bernhardt.....	5.00	45.00
LAST ROSE. Late, pink. A large flower on tall strong stem. Our best late pink.....	5.00	45.00
MARIETTA SISSON. Early, pink. The first pink to bloom in our fields. Very free bloomer; the bush is a solid mass of color.....	5.00	45.00
MINERVA. Late, white. Large perfectly built flowers on sturdy, upright medium-height stems.....	5.00	45.00
QUEEN OF SHEBA. Midseason. The color is entirely different from other peonies; a sparkling bright rose, almost cerise. Large flowers on strong, upright, medium-height stems. An exceptional flower.....	12.50	100.00
ROSABEL. Midseason, American Beauty red. Prolific bloomer. Attractive in the garden and fine for cutting.....	5.00	45.00
DELIGHT. Midseason, Appleblossom-pink, Japanese. Very free-blooming.....	5.00	45.00
IMPERIAL RED. Midseason, a glowing very rich red. Single. One of the most attractive flowers in our fields. Very large.....	7.50	65.00
POLAR STAR. Midseason, white Japanese, with a full yellow center. Large flowers on tall stems.....	10.00	90.00
SEASHELL. Midseason, iridescent bright pink, single flowers on tall stems. It is the finest pink single we have ever seen.....	12.50	100.00

## INTER-STATE NURSERIES

Hamburg, Iowa



# Plant Notes Here and There

By C. W. Wood

I recently made a visit to a garden where I am always sure of learning something about the use of plants. There is a planting on a shaded bank that has inspired me for years, no matter when I go there, be it spring, summer or autumn. And this summer, because the planting has been enlarged to cover the entire bank, which is lightly shaded by overhanging branches of some magnificent oaks and maples, it was especially impressive. The planting is made up entirely of epimediums, those intriguing cousins of the barberry.

Epimedium is a much-neglected genus in this country, where its ability to persist under neglect, after it is once established, should make it a favorite. Apparently, it gives satisfactory returns in almost any soil that is fairly well drained. It has, at least, done well here in northern Michigan in light sand, and I know several plantings in heavy clay which are equally satisfactory. It should, I believe, have some shade, at least for the increased beauty of its leaf coloring if not for its well being.

Not many kinds are generally available in this country, and the names of those that I have seen are badly confused. Forms of *E. macranthum* are, perhaps, the best for most sections. In this species we have plants to eighteen inches or more in height (usually not more than a foot here) with leaves thrice ternate, entrancingly bronzy in shade in their young stages and again in late autumn and winter. Judging from their behavior here, I suspect the leaves would persist throughout the winter in more temperate climates and would thus add much to the winter garden. In any event, their leaves are their fortunes, although the flowers of *E. macranthum* (inner sepals of violet hue; outer sepals, red; spurs, white in the type; all pure white in the lovely variety *niveum*; white, tinged pink, in variety *roseum*) are an added attraction to a beautiful plant.

So far as my knowledge of the genus goes, *E. alpinum roseum* would be my second choice. Here we usually have biterminate leaves, spurs much shorter than in the preceding species, and the entire plant densely hairy. All this, together with bright yellow flowers, makes a lovely plant. About the only other kind one is likely to encounter in American trade is *E. alpinum rubrum*, a Japanese plant with biterminate leaves and red flowers. Al-

though seeds of epimediums are rarely available in this country, the plants should be easily grown from seeds if they are planted in autumn. They are readily grown from divisions made in early spring or even later, if made with care.

## Bachofen's Speedwell.

Another planting in this garden that gave me much pleasure consisted of my old friend, *Veronica bachofeni*. Bachofen's speedwell, a Hungarian that has become sparingly naturalized in the east, has long appealed to me as a splendid garden plant. Every time I see it I wonder why its feathery spikes of blue and its long flowering period have not caught the eyes of gardeners in general. Gray's manual says it is much like the type *V. longifolia*, except for a few minor technical characteristics. Judged from the garden standpoint, it is really better than *longifolia*, making a larger and a more graceful

clump, which in turn provides more of the airy racemes of blue flowers. It is not so spectacular as the clump speedwell, *V. longifolia subsessilis*, but it is hardier and easier to satisfy. In fact, it is a splendid garden plant, blooming from June onward, and good for cutting. Its behavior in the garden is all that one could ask, dry weather causing it little, if any, discomfort and cold weather none at all.

## A Dry Wall Planting.

This garden I visited is blessed with a large dry wall which gives the gardener a wide canvas on which to paint entrancing pictures. It is not my purpose to enter into a discussion of all the associations that interested me, but I should like to tell you about one which could be duplicated in almost any part of the country, no

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5000 2-yr. pots asstd.,	Per 1000
4 to 6 ins.	\$250.00
2000 Cuspidata, 1-yr. pots,	
4 to 6 ins.	250.00
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2000 2-yr. traps., 6 to 8 ins.	350.00
2000 2-yr. traps., 4 to 6 ins.	250.00
7500 2-yr. R.C. flats, 3 to 5 ins.	100.00

20,000 Cuspidata, 1-yr. R.C.,	
3 to 5 ins.	80.00
10,000 Cuspidata, 1-yr. R.C.,	
4 to 6 ins.	100.00
10,000 Cuspidata, 1-yr. R.C.,	
6 to 8 ins.	120.00

The above will be in process of transplanting about Sept. 1. Reserve your requirements now.

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500 Pfitzers, 3 to 4 ft.	
1500 Pfitzers, 2 to 3 ft.	
250 Hill's Golden Pfitzer, 2 to 3 and 3 to 4 ft.	

250 Hibernica, 3 to 4 and 4 to 5 ft.	
250 Ashfordi, 3 to 4 and 4 to 5 ft.	
250 Andorra, 2 to 3 and 3 to 4 ft.	
300 Sabina, 2 to 3 ft.	

50 Vonehron, 2 to 3 and 3 to 4 ft.	
One block asstd. Evergreens, about 2000 in B&B sizes; purchaser to remove this fall at a bargain; have had good care at Ashford, N. C.	

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4 to 5 ft.	4.00
Arborvitae, Globe, 18 to 21 ins.	2.75
Arborvitae, Globe, 21 to 24 ins.	3.50
Arborvitae, Berckmans Golden,	
18 to 24 ins.	2.25
Arborvitae, Berckmans Golden,	
24 to 30 ins.	3.00
Arborvitae, Berckmans Golden,	
30 to 36 ins.	3.75
Hemlock, Canadian, 2 to 3 ft.	2.00
Hemlock, Canadian, 3 to 4 ft.	3.00
Hemlock, Canadian, 4 to 5 ft.	4.00
Juniper, Irish, 4 to 5 ft.	3.00
Juniper, Irish, 5 to 6 ft.	3.75
Juniper, Meyer's Blue, 18 to 24 ins.	2.00
Juniper, Meyer's Blue, 24 to 30 ins.	2.75
Juniper, Meyer's Blue, 30 to 36 ins.	3.50
Juniper, Pfitzer, 30 to 36 ins.	3.00
Juniper, Pfitzer, 36 to 42 ins.	3.75
Juniper, Savin, 30 to 36 ins.	2.50
Juniper, Savin, 36 to 42 ins.	3.25
Pine, Austrian, 3 to 4 ft.	2.50
Pine, Austrian, 4 to 5 ft.	3.25
Pine, Mugho, 18 to 21 ins.	2.00
Pine, Mugho, 21 to 24 ins.	2.50
Pine, Mugho, 24 to 30 ins.	3.00
Pine, Scotch, 4 to 5 ft.	2.75
Pine, Scotch, 5 to 6 ft.	3.50
Pine, White, 4 to 5 ft.	3.00
Pine, White, 5 to 6 ft.	3.75
Pine, White, 6 to 8 ft.	4.50

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Elaeagnus fruitlandi, 3 to 4 ft.	2.50
Mahonia aquifolium, 24 to 30 ins.	2.00
Mahonia aquifolium, 30 to 36 ins.	2.50
Nandina domestica, 18 to 24 ins.	1.75
Nandina domestica, 24 to 30 ins.	2.25
Pyracantha lalandi, 2 to 3 ft.	1.75
Pyracantha lalandi, 3 to 4 ft.	2.25
Pyracantha rogersiana, 2 to 3 ft.	2.00
Pyracantha rogersiana, 3 to 4 ft.	2.75
Viburnum rhytidophyllum,	
2 to 3 ft.	2.00
Viburnum rhytidophyllum,	
3 to 4 ft.	2.75
Viburnum rhytidophyllum,	
4 to 5 ft.	3.75

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Prepared expressly to feed Rhododendrons, Azaleas and other acid-loving plants—also builds up soil's acidity, essential for these plants. In 100 and 10 lb. bags.

## SELL AGRICO TO YOUR TRADE

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matter now not and dry. This planting was made up of two indestructible plants, Sedum middendorffianum and Anthyllis vulneraria, or lady's-finger, which we shall now examine briefly.

Sedum middendorffianum, unlike most deciduous kinds, is a year-long ornament, showing a low rosette of pretty, reddish leaves throughout the winter. This is, as you can readily see, a decided advantage in snowless countries where gardens are enjoyed throughout the year. Then in spring, as the stems begin to elongate, the plant takes on more beauty, especially if the soil is dry and not too rich, as it usually is in a dry wall. The plant's crowning glory comes when the stems end in golden flowers and red and reddish-brown fruits. The planting resembles a rich Persian carpet.

There seem to be two forms of middendorffianum in American gardens, the common type and its rather rare variety, diffusum. Apparently the latter is not generally distributed, for I seldom see it. It might be a good thing for the neighborhood grower to search for and propagate it. Although its stems are longer than those of the type, reaching up to a foot in length, they are quite decumbent, making the plant a better wall ornament. Its leaves are lanceolate in shape and sharply toothed in the up-

[Continued on page 48.]

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## Coming Events

### MEETING CALENDAR.

September 3 to 5, National Nut Growers' Association, Ohio Agricultural Experiment Station, Wooster.

September 10, Western Pennsylvania Nurserymen's Association, Hotel Webster Hall, Pittsburgh.

September 16 to 18, Oregon Association of Nurserymen.

September 23 to 25, California Association of Nurserymen, Hotel Claremont, Berkeley.

October 8 to 10, United Horticulture, Wade Park Manor, Cleveland, O.

November 17 to 20, American Institute of Park Executives, Jefferson hotel, St. Louis, Mo.

December 2 and 3, Minnesota State Nurserymen's Association, Radisson hotel, Minneapolis.

### CALIFORNIA PROGRAM.

Plans for the 3-day convention of the California Association of Nurserymen, to be held September 23 to 25 at the Hotel Claremont, Berkeley, Cal., have been announced by Jack Lincke, executive secretary. The convention is to be open only to members of the association and their invited and registered guests. Requests for hotel reservations should be sent directly to Jack McDonnell, convention chairman, whose address is 5146 Telegraph avenue, Oakland, and not to the association's state office.

The first day will be devoted to a meeting of the board of directors.

The opening general session will be called to order September 24 by Chairman McDonnell, who will introduce President Paul C. Moulder. Following a welcoming address by the mayor of Oakland and the president's address, there will be talks on "Multiple Management" and "An Advertising Program."

Frank James, E. James Nursery, Oakland, will be chairman of the organization luncheon, at which the guest speaker is to be Robert Sacks. After luncheon, Secretary Lincke will address the group. There will be talks by George C. Roeding, California Nursery Co., Niles, on "Landscape Nursery Plans"; by Paul Smith, editor of the San Francisco Chronicle, and by a banker, whose name is to be announced later, on "Credit."

A radio program featuring Rolly Langley, Norvell Gillespie and Oliver Kehrlein will be a novelty of the morning session September 25. Charles Kraft will discuss "Future Housing."

At a luncheon meeting of the California chapter of the American Asso-

ciation of Nurserymen, Clyde Stocking will preside and Awdry Armstrong, Ontario, the newly elected vice-president of the A. A. N., will be the guest speaker.

At the final session, Richard P. White, executive secretary of the A. A. N., will address the group. There will be a talk by a landscape architect and an address on the subject of merchandising. Committee reports and the election of officers will bring to a close the business meeting.

Some prizes are to be awarded at the end of each session. Other entertainment includes dancing at the Hotel Claremont Tuesday evening and the president's banquet at 8 p. m. September 25.

### ILLINOIS DIRECTORS MEET.

After holding eleven conventions at the La Salle hotel, Chicago, the Illinois State Nurserymen's Association will move back to the Sherman hotel for its annual convention the

second week in January. The La Salle hotel was badly damaged by fire in early June, and material shortages have delayed rehabilitation work so that it became necessary to find another location.

Because Chicago hotels are filled to capacity, early reservations will be necessary. A block of sleeping rooms has been reserved at the Sherman hotel, but mostly twin-bed rooms are available; single rooms will be at a premium. Wherever possible, nurserymen are requested to plan ahead on doubling up for their stay. Early arrival will also facilitate matters.

Following a meeting of the board of directors of the Illinois State Nurserymen's Association August 9, at the office of Palmgren's Nurseries, Glenview, members of the board drove through the Glenview portion of Palmgren's Nurseries and lunched at the Homestead restaurant near by. After luncheon visits were made to Simonsen's Nursery, Golf Nursery, F. D. Clavey Ravinia Nurseries, Inc., and Charles Fiore Nurseries. Secretary Miles W. Bryant reports that these nurseries looked well, despite the drought which had prevailed in

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- 1 Carload of Magnolia, small flowering trees, etc.
- 1 Carload of Blue Spruce.

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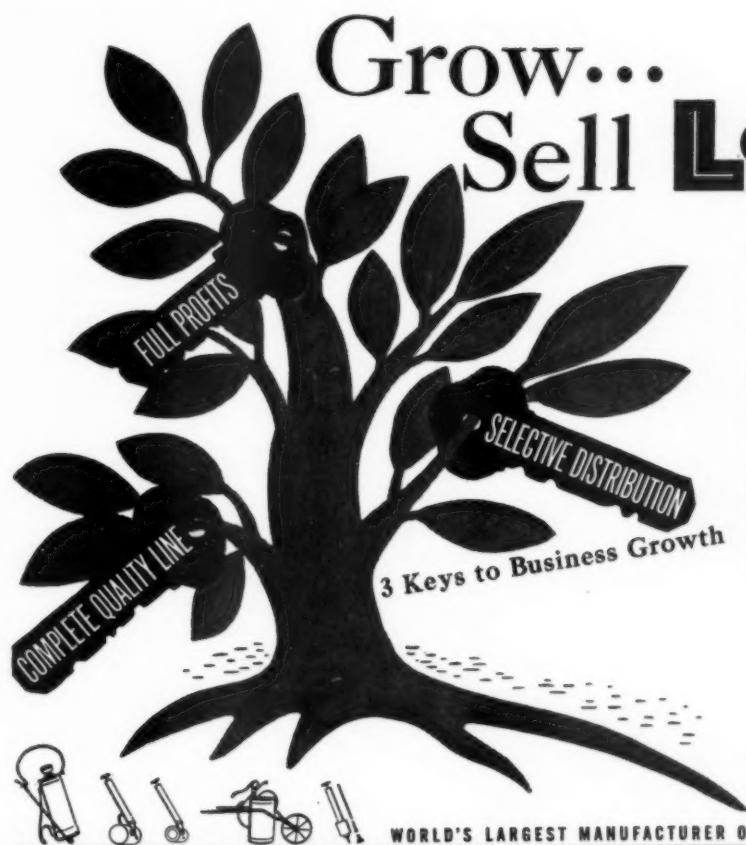
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### WESTERN PENNSYLVANIA ASSOCIATION TO MEET.

Timely topics will be discussed by guest speakers at the fall meeting of the Western Pennsylvania Nurserymen's Association to be held at the Hotel Webster Hall, Pittsburgh, September 10, announces Secretary Louis Wissenbach. The meeting will be called to order at 3:30 p. m., and dinner will be served at 6:30 that evening.

H. B. Musser, professor of experimental agronomy at Pennsylvania State College, will speak on turf developments, and Dr. Henry J. Menu-san, Jr., assistant extension entomologist, will discuss insects. "Plant Identification" is the topic chosen by Robert P. Meahl, assistant professor of the nursery industry. J. S. Champion, Allegheny county vocational education adviser, will discuss "GI Training on the Job."

### SOUTHERN SHADE TREE CHAPTER TO MEET.

Dr. Curtis May, of the United States Department of Agriculture research center at Beltsville, Md., has

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We are pleased to offer you the following evergreens for fall delivery.

	Each
Black Hills Spruce, 3 to 4 ft.....	\$3.00
Norway Spruce, 2 to 2½ ft.....	1.75
Norway Spruce, 2½ to 3 ft.....	2.50
Norway Spruce, 3 to 4 ft.....	3.25
Mugho Pine, 15 to 18 ins.....	1.75
Juniper Pfitzeriana, 3 to 4 ft.....	6.00
Thuja Occ. Woodwardi, 2 to 2½ ft.....	2.25
Juniper Virg. Burki, 4 to 5 ft.....	5.00
Juniper Virg. Canadensis, 5 to 6 ft.....	6.50
Juniper Virg. Glauca, 5 to 6 ft.....	6.50
Juniper Keteleeri, 5 to 6 ft.....	6.50
Taxus Canadensis, 15 to 18 ins.....	4.00
Thuja Occ. Woodwardi, 6 to 8 ins.....	.15

**EAGLE CREEK NURSERY CO.**

NEW AUGUSTA, IND.

## ACER PLATANOIDES— Norway Maples

6 to 8 ft., trans., \$45.00 per 100. 6 to 8 ft., ¾ to 1-in. cal., whips, \$75.00 per 100. 8 to 10 ft., ¾ to 1-in. cal., well branched, \$10.00 per 10; \$85.00 per 100. 8 to 10 ft., 1 to 1½-in. cal., well branched, \$12.50 per 10; \$100.00 per 100.

1½ to 1¾-in. cal. (in the ground), \$1.50 each, plus 25¢ dug bare root. 1½ to 1¾-in. cal. (in the ground), \$2.00 each, plus 35¢ dug bare root. 1¾ to 2-in. cal. (in the ground), \$2.25 each, plus 40¢ dug bare root.

**STATE ROAD NURSERY**

State and Sproul Rds.  
Route 1, Media, Pa.

## HEMLOCKS and UPRIGHT YEWs

Taxus Hicksi and Capitata, 3 to 4 and 4 to 5 ft. Also Cupidata, 24 to 30 and 30 to 36 ins. Some fine specimens 6 to 8 ft.

Hemlocks up to 5 to 6 ft.

Beautiful specimens of Sugar Maple, Pin Oak and other shade trees, 6 to 8-in. cal.

American Holly, big sheared specimens, 6 to 12 ft., heavily berried, foliage dense and full to the ground. Also in tree form.

**WILLIAMS & HARVEY NURSERY**

3504 W. Cary St. Richmond, Va.  
Phone F. L. Williams in evening after 7 p.m.—4-9412.

## BOWLES IMPROVED

Variety of VINCA MINOR

Large blue flowers, excellent foliage.

Stocky plants, out of 2¼-in. pots. Potted last winter.

\$15.00 per 100

**W. A. NATORP CO.**  
Cincinnati 29, Ohio

been appointed chairman of the meeting of the southern chapter of the National Shade Tree Conference to be held at the Battery Park hotel, Asheville, N. C., October 16 to 18. The appointment was made by Dr. George Hepting, president of the chapter.

Feature speaker at the evening banquet Friday, October 18, will be Dr. Richard P. White, executive secretary of the American Association of Nurserymen and formerly executive secretary of the National Shade Tree Conference.

The program will include prominent speakers who will cover important phases of shade tree problems, such as line clearance operations, maintenance of soil fertility, insect and disease pests and management factors. A clinic and symposium on live oak, including a discussion of the propagation, transplanting, pests and maintenance of the species, will be featured.

#### SET MINNESOTA DATES.

The annual convention of the Minnesota State Nurserymen's Association will be held at the Radisson hotel, Minneapolis, December 2 and 3, according to an advance announcement by R. N. Ruedlinger, secretary.

#### MIDWEST EXPOSITION.

The annual Little Midwest Horticultural Exposition will be presented by students of horticulture at Iowa State College, at Ames, November 15 and 16. The show is held in conjunction with the Iowa Horticultural Society, the Iowa Fruit Growers' Association and other state garden and horticultural societies and will feature horticultural advances of the past 100 years and those expected in the future. One of the largest horticultural shows of its kind in the country, this all-student production has drawn an average attendance of 10,000 persons in past years.

#### RAILROAD FLOWER SHOW.

Said to be one of the largest garden clubs in America, the Pennsylvania Garden Club will hold its victory flower show September 13 and 14 at the Pennsylvania railroad station, Philadelphia.

A special feature class, "States on Floral Parade," will include floral exhibits from Pennsylvania Railroad traffic representatives throughout the country. The show has three divisions, the first open to the public, the second open only to members of the garden club and the third for

railroad employees of a specified eastern region whose flowers are grown on company property. Awards are made to each of the more than 300 class entries, with valuable sweepstakes prizes for the eleven sections.

The club was organized in 1935 by William A. Whittaker. An annual banquet and election of officers are held in December, illustrated lectures are offered during the winter, garden tours are featured in the spring and summer and the fall flower show climaxes the club's year. Branch flower shows are held at Altoona and Renova, Pa.; New York city, and Jamaica, N. Y.

#### COVER ILLUSTRATION.

##### *Spiraea Cantoniensis.*

Among our most common small to medium shrubs are the various species and forms of spiraeas. It would be difficult to select one or two of the spiraeas as being better than the

others, but if I had to make a choice, one of my selections would certainly be *Spiraea cantoniensis*, the Reeves spiraea. The Reeves spiraea is not a new introduction, since the records show that it was introduced from China and Japan in 1824. It is found quite commonly in nurseries, but it has not been produced in abundant quantities such as has been true of *Spiraea vanhouttei*. In many ways the Reeves spiraea is superior to its offspring, *Spiraea vanhouttei*.

*Spiraea cantoniensis* attains the height of five to six feet and is rounded in form, with arching and drooping branches and excellent foliage. The leaves are narrower and longer than those of the Van Houtte spiraea, deeply toothed, dark green or somewhat bluish-green above and

#### HARDY NATIVE EVERGREENS

Collected Stock  
Canadian Hemlock, American  
Arborvitae, Balsam Fir

	Per 1000
3 to 6 ins.....	\$ 8.00
6 to 9 ins.....	12.00
9 to 12 ins.....	25.00
12 to 18 ins.....	35.00

Cash please.

**R. M. COLE**

Box 37

Charlotte, Vi.

#### LANDSCAPE MATERIAL

in best assortment, such as Jap. Red Maple, Taxus, Magnolias, Evergreens, etc. Write for list. Also list of liners.

#### DEERFIELD NURSERIES

Deerfield Street P.O., N. J.

#### FAMOUS CUSHION MUMS

Pink, white, red, bronze. \$4.00 per 100. \$37.50 per 1000. **YELLOW CUSHION** and **LITTLE BOB**, \$6.00 per 100. \$55.00 per 1000. **NEW GOLD CUSHION**, \$10.00 per 100.

Big Chrysanthemum catalog.

**WONDERLAND NURSERIES**

Ellerson, Va.

#### WANTED

Small Evergreens for lining-out purposes, such as Mt. Laurel, Hemlock, Colorado Spruce, Douglas Fir, Pines, or what you may have to offer.

**BAGATELLE NURSERY**

Huntington Station, L. I., N. Y.

## Maloney's

Offer for Fall and Spring delivery  
**2-year Standard Apple, Sweet and Sour Cherry, Plum and Standard Pear.** Also **2-year Shrubs**, bushy, well rooted, twice transplanted.

**Evergreens**, three times transplanted, properly sheared, earth balled, or moss balled. Mail us your list of wants.

We would appreciate your surplus list; we need **Roses, Berries**, certain varieties of **Ornamental Trees, Vines**, etc. Write for our surplus and want list.



**MALONEY BROS.  
NURSERY CO., INC.**

Danville, New York

#### We Offer—

**EVERGREENS**—In a large assortment of **PYRAMIDAL** and **GLOBE ARBORVITAE, FITZGER JUNIPER** and **YEW**s in grades at attractive prices. **SOME LARGE SPECIMEN EVERGREENS, SHRUBBERY** and **SHADE TREES.**

Mail want list for prices.

**THE WESTMINSTER NURSERIES**

Westminster, Md.

**Grapevines, Currant Roots, Currant Cuttings and Berry Plants.**

Small Fruit Specialists.

**WEST HILL NURSERIES**

Fredonia, N. Y.

Since 1875

pale bluish-green beneath. The foliage is much superior to that of the Van Houtte spiraea in that it is of a better color and persists later in the fall.

One of the outstanding characteristics of the Reeves spiraea is its attractive flowers. The flowers are pure white, often double and slightly larger and effective over a longer period than those of the Van Houtte spiraea. Another of its good qualities is the fact that the old flowers drop soon after they fade, leaving an attractive plant throughout the summer period. This is not always true in the case of the Van Houtte spiraea.

Not much needs to be said regarding the culture of the Reeves spiraea, since, characteristic of the species, it will do well under a wide variation of conditions. For best results the soil should be medium fertile and well drained. It will do well in sunny or partial shady situations.

One of the criticisms which have frequently been raised regarding the Reeves spiraea is that of its hardiness. Usual reports indicate that it is less hardy than the Van Houtte spiraea, and this is undoubtedly true. However, it has proved to be reliably hardy at Columbus, O., standing temperatures as low as 20 below zero without any appreciable injury. It is popular in the south. Propagation can be easily accomplished by either softwood or hardwood cuttings.

The Reeves spiraea finds its use in foundation plantings where a plant of this sort can be used in informal border planting and in groups. Its highly effective flower and foliage should lead to a more abundant planting of this spiraea and frequently to its substitution for the Van Houtte spiraea where a smaller plant can be used.

L. C. C.

EARL SEANEY, of Fremont, O., has purchased the Moyer Nursery and Perennial Gardens at Clyde, O., and will operate it as the Seaney Nursery.

SINCE fire destroyed all his bulbs four years ago, J. Herbert Alexander, Middleboro, Mass., has been building up stocks of perennials and will specialize in new and rare perennials. Long a dahlia specialist, Mr. Alexander has been doing hybridization work on mallows for the past fifteen years and will introduce several new varieties this year. One, a new crimson-eye variety, has been named Mrs. J. Herbert Alexander for his wife. Other new introductions are May Hayslip and a new rose-red hybrid named Mrs. William T. Seabury.

## COMPACT READY • STOCK •

*Juniperus virginiana canaerti*, 4 to 6 ft., tr.

*Juniperus virginiana glauca*, 4 to 5 ft., tr.

*Juniperus virginiana burki*, 4 to 6 ft., tr.

*Juniperus chinensis pyramidalis hilli*, 4 to 6 ft., tr.

*Juniperus chinensis columnaris glauca*, 4 to 6½ ft., tr.

*Juniperus chinensis stricta*, 18 ins. to 3 ft., tr.

*Juniperus chinensis pfitzeriana*, 2½ to 4 ft., tr.

*Juniperus chinensis andorra*, 2 to 4 ft., tr.

*Thuja occidentalis pyramidalis*, 4 to 6½ ft., tr.

*Biota conspicua*, 4 to 5 ft., tr.

These plants are well sheared, perfect stock. We quote the price on the nursery only. Come and select your plants and mark them. We have only a few carloads to spare this fall.

### PAUL OFFENBERG NURSERIES

Phone: Evergreen 4315

Columbus, Ohio

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Nurserymen and Plantsmen

Visitors always welcome.

Paterson Ave.

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### HESS' NURSERIES

Mountain View,  
New Jersey



# On and Off the Nursery

By L. C. Chadwick

## NURSERY FERTILIZATION.

It is not my purpose in this discussion to recommend fertilizers for different nursery crops, but rather to point out some of the facts that should be kept in mind in applying fertilizers to nursery stock and certain fertilizer reactions in the soil.

Fertilization is more than simply putting fertilizer on or in the soil. With the exception of nitrate nitrogen, most of the other essential nutrient elements such as phosphorus, potassium, calcium and magnesium are not readily mobile within the soil. They are absorbed on the surface of the soil particles. The plant roots must come in close contact with these particles in order for the nutrients to become available to the plant. This means that the plant must have a well developed root system for maximum utilization of plant nutrients and subsequent maximum growth. Thus a plant grows only as it develops a good root system. Adequate aeration, moisture, temperature and nutrients assure this development.

It will do little good to apply fertilizers with the hope of stimulating plant growth unless the factors of soil moisture and oxygen are favorable. These factors are essential for good root growth, and only by the growth of roots and their ramification through the pore space of the soil do they come in contact with new supplies of moisture and nutrient elements. Except for distances of only a few inches, water, and consequently the nutrient elements, move by capillary action too slowly and in too small quantities to be of any great benefit to the plant. Any nutrients applied to the soil must be so placed that the roots, in growth, will come in contact with them.

The essential elements for rapid plant growth are taken up by root hairs from the reservoir of available nutrients held on the surface of the finer soil particles or in the soil solution film about these particles. The actual mechanism of transfer of the essential elements from the soil particles to the plant root is by base exchange. This base exchange can be explained by the fact that certain bases such as calcium, magnesium and potassium, all carrying positive charges, are attracted to the negatively charged soil particles. Some of these elements are held much more tightly by the soil particle than others,

and consequently, one element may be capable of replacing another.

The four most common forms of nitrogen are (1) nitrates, (2) ammoniacal compounds, (3) the water insoluble organic carriers, such as the seed meals, and (4) the soluble organic nonprotein forms, such as urea and cyanamide. The nitrate forms are held loosely by the soil particles and, consequently, are readily available and are subject to leaching from the soil. They tend to reduce soil acidity. The ammoniacal forms, such as ammonium sulphate, are held by the soil particles more tightly and are not so easily leached from the soil. They are readily available to plants and increase soil acidity. The protein organic nitrogen fertilizers are slow in becoming available and expensive on the basis of the cost of the amount

of available nitrogen contained. They have little influence on soil acidity. The nonprotein organic nitrogen compounds are readily available, are resistant to leaching and decrease acidity or show only a slight tendency to increase it. The choice of these nitrogen fertilizers will depend upon the plant, the soil condition and the time of year the fertilizer is applied. With most woody ornamentals the ammoniacal compounds may be considered to be the most efficient in view of the usual application methods, but the combination of the various forms in complete fertilizers is suggested for established plants in landscape plantings.

Phosphorus is largely nonmobile in the soil, being tightly held by the soil particles. High acidity or alkalinity retards its availability. It is highly resistant to leaching and exerts little change on soil reaction. High organic matter content is an aid to its availability, and it is best applied by localized applications.

Potash is available in acid soils, but

## LAKE'S SHENANDOAH NURSERIES Shenandoah, Iowa

*Wholesale growers of  
a fine assortment of*

### GENERAL NURSERY STOCK

Your inquiries will be appreciated.

## SURPLUS

Red Pine, up to 4 ft.  
White Pine, up to 4 ft.  
White Spruce, up to 3 ft.  
Andorra and other low Junipers.  
Also possibly Pfitzer Junipers in various sizes in small quantities.

Send us your want list. No Catalog. No more lining-out stock until further notice.

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### Write for WHOLESALE CATALOG No. 19

AMERICA'S LARGEST IRIS  
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Also Grower of Hemerocallis, Poppies  
and Hardy Chrysanthemums.  
C. F. WASSENBERG, Van Wert, O.

### LINING-OUT EVERGREENS and AZALEAS

Sturdy Plants.

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## SPECIMEN TREES

### 300 Colorado Blue Spruce

Sheared trees of good form,  
good colors, very full and  
dense, in 2½ to 4-foot  
grades.

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## VERHALEN NURSERY COMPANY

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Wholesale Growers

## ARCHIBALD ENOCH PRICE "The Care of Trees"

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Glenview, Illinois  
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## On Import Stock

Refer to advertisement page 25 August 15 issue of American Nurseryman.

I want to extend here a humble apology for many inquiries which I did not answer. These have been and are strenuous times. I got behind in spring, was short of office help and had little to offer for fall at the time. Am gradually catching up and hope to do better.

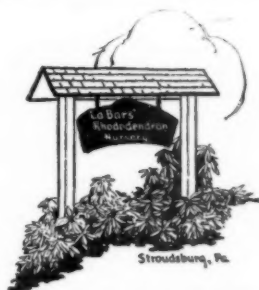
Imported stock I handled spring 1946, with but few exceptions and those were small orders we repacked, came through satisfactorily. I have many letters saying just that and asking for lists for this season.

The only advantage you have in ordering through me instead of direct is that I live near the inspection quarters of the plant bureau at Hoboken, have had up-to-date experience and can give personal attention to complying with regulations, paying all charges and getting stock from the steamer to the express company promptly.

I find nurserymen as a whole pretty swell and fair fellows to do business with. I am not a grower, have some items I try out here, otherwise I just represent the growers and am careful about the stock I offer and the integrity and dependability of the fellow who grows it. We sometimes get disappointments in that, too.

**ARTHUR DUMMETT**

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Bristol Nurseries, Inc.  
Barnes Brothers Nursery Co., Inc.  
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**Ornamental Trees, Shrubs  
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Nursery Stock.

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Manchester, Conn.

less so in those of a neutral or alkaline reaction. The mobility of potassium in the soil is intermediate between phosphorus and nitrate nitrogen. Potash fertilizers cause little change in soil reaction. Application below the surface layers is recommended, since alternate wetting and drying of the surface soil inches tends to bring about fixation of the potash.

Ideas concerning the proper fertilization of nursery stock vary considerably. On the basis of our present information, it is recommended that, for the most part, farm manures and commercial fertilizers be applied to the green manure, cover and sod crops rather than to the nursery stock itself. Supplementary applications of commercial fertilizers may be necessary. The best policy to adopt is to add fertilizers to the extent of maintaining sufficient vigor to produce high-quality stock. Fertilization to the extent of forcing rapid growth frequently does not result in the highest quality. A normal uniform rate of growth is the most desirable regardless of whether the plants are growing in the nursery or are established plants in landscape plantings.

Since both single elements and complete fertilizers are used in fertilization practices, consideration should be given the cost per pound of each of the essential elements and the total available units in the fertilizer. An analysis of the costs should make it apparent that the price per ton does not give a clear indication of the real value of a fertilizer. Nurserymen should figure its value on the amount of essential element or elements he wishes to apply.

For example, according to the accepted analysis, ammonium sulphate contains twenty per cent nitrate of soda, sixteen per cent ammonium nitrate and 32.5 per cent nitrogen. Thus, in a ton of these materials there would be 400 pounds, 320 pounds and 650 pounds of nitrogen, respectively. At the present price per ton of these materials, the nurseryman would pay 11.3 cents per pound for nitrogen using ammonium sulphate, 15.3 cents if he used nitrate of soda and 9.4 cents if he used ammonium nitrate.

In a commercial brand of fertilizer, such as 4-12-4, there is a total of twenty units or, in other words, 400 pounds of the essential elements. Thus, based on the present price, the cost of the essential elements in this fertilizer is 11.7 cents per pound. If, however, nitrogen is the only element desired, it is apparent how uneconomical it would be to apply 4-12-4. The cost would be approximately five

[Concluded on page 45.]

## LINING-OUT STOCK FINISHED NURSERY STOCK

	100 Rate	1000 Rate
Azalea mollis, 6 to 9 ins.	\$0.35	
Azalea mollis, 9 to 12 ins.	.50	
Azalea mollis, 12 to 15 ins.	1.35	
Azalea mollis, 15 to 18 ins.	1.65	
Azalea mollis, 18 to 24 ins.	2.00	
Rhododendron Hybrid, 12 to 15 ins.	2.75	
Rhododendron Hybrid, 15 to 18 ins.	3.50	
Hemlock, 15 to 24 ins.	2.90	
Hemlock, 3 to 5 ft.	3.00	
Hemlock, 3 to 4 ft.	3.75	
Hemlock, 4 to 5 ft.	4.50	
Hemlock, 5 to 6 ft.	5.50	
Hemlock, above 6 ft. to 10 ft. Per ft.	2.00	
Mugho Pine, 18 to 24 ins.	2.00	
Mugho Pine, 24 to 30 ins.	2.50	
Austrian Pine, broad, 6 to 8 ft.	6.50	
Taxus canadensis, 18 to 24 ins.	3.75	
Taxus cuspidata, 12 to 15 ins.	1.75	
Taxus cuspidata, 15 to 18 ins.	2.25	
Euonymus europaeus, 3 to 4 ft.	.50 BR	
Euonymus carrierei, 15 to 18 ins.	.50 BR	
Viburnum opulus nanum, 6 to 9 ins.	.35 BR	
Viburnum opulus nanum, 9 to 12 ins.	.50 BR	
Cercis canadensis (Redbud), broad, 6 to 8 ft.	3.50	
Norway Maple, well branched, 10 to 12 ft.	2.50 BR	
Norway Maple, well branched, 12 to 14 ft.	3.00 BR	
Sugar Maple, 2 and 3-in. cal.	Per cal. in 3.50 BR	
Pin Oak, 5 to 6 ft.	1.25 BR	
Pin Oak, 6 to 8 ft.	1.75 BR	
American Elm, 2 to 4-in. cal.	Per cal. in 3.50 BR	
European Mt. Ash, 10 to 12 ft.	3.50 BR	
European Plane Tree, 8 to 10 ft.	2.50 BR	

## LINING-OUT STOCK

	100 Rate	1000 Rate
Azalea mollis, 1 tr. (from beds)	\$0.10	\$0.09
Rhododendron Hybrids, 1 tr. (beds)	.10	.09

Terms: Cash; No C.O.D.

Lining-Out, 35 plants at 100 rate, 300 plants at 1000 rate. Less than 10 plants at 10 per cent additional. No packing charged on lining-out stock or stock called for at nursery. Finished stock, truckloads only. Beetle certified.

## PALLACK BROS. NURSERIES, INC.

R. F. D. 1 Harmony, Pa.

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## EXTRA QUALITY

1000 Irish Junipers, 5 to 6 ft.

1500 Irish Junipers, 4 to 5 ft.

These have been kept sheared and are well filled, extra nice plants.

## FIKE NURSERIES

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Splendid Stock

Write for Special Quotations

**LESTER C. LOVETT**

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## PRINCETON NURSERIES

of PRINCETON, N. J.

**SUPERIOR**

**Hardy Ornamentals**

# Summer Meetings

## PENNSYLVANIA MEETING.

A program of varied speeches was presented at the summer meeting of the Pennsylvania Nurserymen's Association held at the Penn-Harris hotel, Harrisburg, August 6 and 7. Nurserymen from New York and New Jersey were present, as well as a large percentage of Pennsylvania association members.

"Horticultural Research of the Past Year" was discussed by Dr. Henry T. Skinner, curator of the Morris Arboretum at the University of Pennsylvania, Philadelphia. Topics under this heading included automatic watering, fertilizers, plant injury, insects and diseases, mulches and organic soil, propagation, trees and shrubs, weed eradication and wood preservatives. A list of references supplementing his speech was distributed to the audience.

Arthur F. Paul, Andorra Nurseries, Inc., Conshohocken, first prize-winner in the competition for sales and display grounds plans sponsored by the National Landscape Nurserymen's Association, gave an illustrated talk entitled "Rich Man, Poor Man." Mr. Paul believes that an aesthetic understanding of nature is essential for good landscape design.

Speaking on "Wise Land-use Planning," Ivan McKeever, state conservationist, stated that he believes nurserymen are becoming more conscious of the necessity for conservation, even where complete planting would seem to prevent any soil erosion. Mr. McKeever described current methods of soil conservation.

Following a banquet Tuesday evening, August 6, David R. Perry, special deputy attorney general, addressed the group. Stressing the importance of the nursery business in the national economy, Mr. Perry urged nurserymen to recognize the position of landscape architects in the trade. It is the duty of each nurseryman to become the horticultural authority in his locality, and an educational program on nursery stock values would help to inform the public.

Wilbur Nisley, president of the Pennsylvania association, conducted the after-dinner program. Others who spoke were Owen B. Schmidt, of F. D. Moore & Sons, Narberth, who reported on the recent convention of the American Association of Nurserymen at Miami Beach, Fla., and Dr. J. Horace McFarland, of the American Rose Society.

A number of nurseries in the vicinity were visited, including the Blue Ridge Nursery, Linglestown; the Colonial Nursery, Inc., Colonial Park, and the Susquehanna Nursery, Harrisburg.

## NEW JERSEY OUTING.

In a day devoted almost exclusively to fun, nearly 100 New Jersey nurserymen and their wives gathered at Eno's hotel, Forked River, August 13.

About twenty-five early risers started the day by fishing in the Atlantic ocean. High-catch prize for the day went to Mrs. Conrad Maarschalk, of Ridgefield Park, with a total of twenty-three fish, including weakfish, fluke and kingfish. C. W. M. Hess, Jr., 14 years old, caught more fish than his father.

The entire group enjoyed an old-

fashioned shore dinner lasting nearly three hours. Among the prominent guests were New Jersey's secretary of agriculture, W. H. Allen; Herbert Voorhees, president of the New Jersey farm bureau; R. E. Harmon, Essex county agricultural agent, and A. C. Hornberger, Daniel Brogan and M. A. Jacobsen, of the American Agricultural Chemical Co., Carteret.

In addition to the present president, George White, the following past presidents of the association were in attendance: C. W. M. Hess, Mountain View; C. Russell Jacobus, Upper Montclair; Arthur Levick, Bridgeton; William Flemer, Jr., Princeton; Col. Edward Phillips, Andover; L. C. Schubert, New Brunswick, and Walter Ritchie, Rahway.

Secretary Pirone introduced Prof. Raymond Korbobo, who has been appointed to the staff at Rutgers University, New Brunswick, as extension landscape gardener, the position formerly held by Prof. B. C. Blackburn.

At a short meeting of the executive

# J & P

In good assortment.

**EVERGREENS  
SHADE TREES**

**SHRUBS, VINES  
HEDGE PLANTS, etc.**

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NEWARK, NEW YORK STATE

## The Homestead Nurseries

H. G. Benckhuysen. **BOSKOOP, Holland**

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AZALAS  
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Shrubs and Trees,  
including liners.  
Rhododendrons and Azaleas  
Hardy Perennials  
Peonies

NOVELTIES IN ALL LINES.

Ask for wholesale catalog.

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Growers and exporters since 1903.

## BULK & CO., Nurserymen, of BOSKOOP, HOLLAND

Experienced Exporters of Nursery  
Stock since 1914.

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## ROSA MULTIFLORA JAPONICA and PRUNUS TOMENTOSA (Nanking Cherry)

Healthy, well grown seedlings in a variety of sizes. You will appreciate the quality of this stock.

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Elaberry, Mo.

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Growers of reliable

## HARDY NURSERY STOCK

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## HERBACEOUS PLANTS

Please apply for our new  
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number of good new plants.

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Boskoop, Holland

## GULDEMOND & CO.

(Boskoop, Holland)

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Broadway Station,  
Newport, R. I.

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HOLLAND PLANT LIST

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Growers of a complete  
line of deciduous and  
coniferous species.

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Lake City, Minn.

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List.

**J. V. BAILEY NURSERIES**  
St. Paul 6, Minn.

## GENERAL LINE OF ORNAMENTALS

Fall catalog September 1

**FAIRVIEW EVERGREEN NURSERIES**  
Fairview, Pa.

Wholesale growers of  
**SMALL FRUIT PLANTS**  
Grapes, Currants and Raspberries—  
our specialty.  
Hydrangea P. G.

**FOSTER NURSERY CO., INC.**  
69 Orchard St. Fredonia, N. Y.

Wholesale growers of the best  
Ornamental Evergreens,  
Deciduous Trees,  
Shrubs and Roses.  
Write for our current trade list.  
**THE KALLAY BROTHERS CO.**  
Painesville, Ohio

**BURTON'S**  
HEADQUARTERS FOR  
EVERGREEN GRAFTS, TRANSPLANTED  
EVERGREENS, SHRUB LINERS.  
Write!  
RARE ITEMS YOU DO NOT  
FIND IN MOST LISTS!  
**HILLTOP NURSERIES**  
CASSTOWN, OHIO

committee, the following firms were  
elected to membership: McCleary's  
Nurseries, Sewell; Donbert Nursery,  
Mendham, and G. & M. Greenhouses,  
Bound Brook. D. A. Brogan, Clifton,  
was made an associate member of the  
association. P. P. Pirone, Sec'y.

## CONNECTICUT MEETING.

The Connecticut Nurserymen's As-  
sociation summer meeting, held at  
Lake Compounce, Wednesday, Au-  
gust 14, drew a record attendance of  
128 members and guests.

Bowling and visiting were enjoyed  
during the morning, as the weather  
was gray and light showers were fall-  
ing. At 12:30 dinner was served in  
the upstairs ballroom, with a choice  
of steak, chicken or roast beef. Din-  
ner music and group singing, led by  
Warren Richards, of Clinton Nurs-  
eries, enlivened the occasion.

At the short business meeting  
which followed, five new members  
were voted in and changes in the  
bylaws were voted unanimously.

One of the interesting features of  
the meeting was the showing of a pic-  
ture taken of a Connecticut nursery-  
men's group at a summer meeting at  
New Haven in 1911. Paul Hubbard,  
of Bristol, explained the circumstances  
of the picture, since he was one of  
those present at the 1911 gathering.  
This picture was brought in by  
Charles S. Burr, whose father, the  
late C. R. Burr, was also in the pic-  
ture. Most of the members and  
guests stayed to see Peter Cascio's  
entertaining moving pictures of the  
American Association of Nursery-  
men's convention held in July at  
Miami Beach, Fla.

As the sun had emerged by this  
time, horseshoe throwing was popu-  
lar. Each member and his guest was  
supplied with free tickets for the  
amusements by the entertainment  
committee. A. C. Bird, Sec'y.

## KENTUCKY OUTING.

The summer outing of the Ken-  
tucky Nurserymen's Association was  
enjoyed by about fifty nurserymen  
and their families. They met at San-  
ders Court, Corbin, on the afternoon  
of August 13 and were served a deli-  
cious steak dinner. Most of the party  
had overnight accommodations there.

After dinner the group held its usu-  
al party. At midnight they visited  
Cumberland falls in the hope of see-  
ing a moon bow, but there was too  
much fog over the river.

On the following morning, a visit  
was made to Levi Jackson state park  
to see the Wilderness trail, the mu-  
seum, the mill with its collection of

## LARGE STOCK— GOOD ASSORTMENT— EVERGREENS

Send us your  
list of wants  
for quotations.

## OR BETTER STILL—

Come and  
See them for  
Yourself!

**WILLIS NURSERY CO.**  
Ottawa, Kansas

## PEONIES EVERGREENS

Our special Preliminary Price List  
of plants for early Fall shipment,  
now ready, offers better than 250  
varieties of Peonies as well as a  
choice assortment of Evergreens.

**BRYANT'S NURSERIES**  
Princeton, Illinois

The **CHRYSANTHEMUM**  
CATALOG you cannot afford  
to be without.  
**WONDERLAND NURSERIES**  
Ellerson, Va.

## NOVELTY PERENNIAL and ROCK GARDEN PLANTS

Wholesale Trade List now ready.  
Send for your copy.  
**CARROLL GARDENS** Westminster, Md.

## Old English BOXWOOD

(Wholesale Only)  
All slow-grown dense specimens. Red clay soil.  
Priced by height and spread. 18x12 ins. to 24x22  
ins. in unlimited quantities. Also large specimens  
up to 5 ft. Write for price list.

**BOXWOOD GARDENS**  
Mrs. R. P. Royer High Point, N. C.

## Fall Trade List-1946

Ashford Juniper, 4 to 5 ft.....	\$2.25
Irish Juniper, 4 to 5 ft.....	2.00
Irish Juniper, 5 to 6 ft.....	2.25
Fastigiata Juniper, 4 to 5 ft.....	2.00
Fastigiata Juniper, 5 to 6 ft.....	2.25
Greek Juniper, 24 to 30 ins.....	2.00
Greek Juniper, 30 to 36 ins.....	2.25
Pfitzer Juniper, 24 to 30 ins.....	2.00
Savin Juniper, 18 to 24 ins.....	1.75
Baker's Arborvitae, 30 to 36 ins...	1.75
Berkmans Arborvitae, 24 to 30 ins.....	1.75
White Pine, 4 to 5 ft.....	3.00
White Pine, 5 to 6 ft.....	3.25
Scotch Pine, 4 to 5 ft.....	3.00
Scotch Pine, 5 to 6 ft.....	3.25
Mugho Pine, 18 to 24 ins.....	1.85
Norway Spruce, 3 to 3 1/2 ft.....	2.00
Black Hills Spruce, 18 to 24 ins...	2.00
Mahonia, 18 to 24 ins.....	1.85

Pfitzers cannot exceed 1/3 of total order due to limited supply. 10 per cent discount on all orders of 300 or more. All items B&B.

### TILLMAN-EAKINS NURSERY

R. R. 2 Newburgh, Ind.  
(5 mi. east of Evansville.)

## NORTHERN-GROWN EVERGREENS

Juniperus Virginiana Hilli, 3 1/2 to 4 ft.  
Juniperus Virginiana Hilli, 4 to 5 ft.  
Juniperus Pfitzeriana, 2 to 2 1/2 ft.  
Juniperus Pfitzeriana, 2 1/2 to 3 ft.  
Mugho Pine, 15 to 18 ins.  
Mugho Pine, 18 to 24 ins.  
Black Hills Spruce, 18 to 24 ins.  
Black Hills Spruce, 24 to 30 ins.  
Taxus Cuspidata, 18 to 24 ins.  
Taxus Cuspidata, 24 to 30 ins.

Also a general line of northern-grown evergreens.

Visitors Welcome!  
**BROWN DEER NURSERIES**  
Operated by  
**HOLTON & HUNKEL CO.**  
P. O. Box 1747  
Milwaukee, Wis.

**Boyd**  
NURSERY COMPANY

McMinnville, Tenn.

**ORNAMENTAL SHRUBS  
SHADE TREES, VINES  
FOREST TREE SEEDLINGS  
LINING-OUT STOCK**



### EVERGREENS

Growers of Quality Evergreens  
Lining-out Stock a Specialty  
Write for Trade List

**EVERGREEN NURSERY CO.**  
Established 1864 : STURGEON BAY, WIS.

millstones and many other interesting displays. This park is maintaining as near as possible the atmosphere of the times when the earliest settlers went to Kentucky.

As usual, there was no formal program, and the time was spent in visiting and sight-seeing. This kind of meeting is fast becoming a tradition of the Kentucky nurserymen's summer meetings.

Howard G. Tilson, Sec'y.

### CENTRAL CALIFORNIA CHAPTER MEETS.

Officers elected at the August 8 meeting of the Central California Nurserymen's Association were president, H. J. Sandkuhle, Sunset Nursery, Oakland, and secretary-treasurer, Ray Burr, Burr-Christian Nursery, Hayward. New members of the executive committee elected to serve two years were Paul Von Kempf, Pacific Nurseries, Colma; James F. Clarke, W. B. Clarke & Co., San Jose; Paul A. Lerner, Bay Nursery, Oakland, and Fred Hammarstrom, West Coast Nurseries, Palo Alto and San Francisco.

Delegates to the state association will be Frank B. James, E. James Nurseries, Oakland, and James Wilson, Peters & Wilson Nursery, Millbrae. Other officers of the group who will serve for the coming year are the executive committee members who will be serving the second year of their 2-year terms. These are Reinhold Weber, Patrick Casey and William Schmidt.

The meeting was well attended, and members particularly enjoyed the Florence Inn, where the dinner meeting was held. The program was interesting, part of it being devoted to color movies taken by John Santos, a friend of one of the members. These movies were shots of every mission on the El Camino Real, which runs from San Diego to San Francisco and is known to tourists as U. S. highway 101. It follows closely the old trails laid down 300 or more years ago by the Spanish conquerors, who were accompanied by priests who founded a mission every twenty miles on that 600-mile trek. All of the missions are kept in excellent condition. Many of them remain as built long ago; others have been renovated and modernized, but are still true copies of the originals.

The speaker of the evening was William A. Ramsey, of the Volkman Seed Co., San Francisco. Mr. Ramsey is in charge of the grass seed department and is a popular speaker on the subject of grass seeds, lawns, lawn making and lawn care. The lawn as

## C. M. Hobbs & Sons, Inc.

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INDIANA

Established 1875

**FRUIT TREES**

**GINKGO**

**NORWAY MAPLE**

**SOFT MAPLE**

**SWEET GUM**

**THURLOW WILLOW**

**WELL GROWN EVER-  
GREENS, in variety.**

1887

1946

## WE OFFER FOR 1946

*our usual line of*

**SHRUBS EVERGREENS  
FOREST AND SHADE TREES  
VINES AND CREEPERS**

Trade List mailed on request.

**FOREST NURSERY CO., INC.**  
J. R. Boyd, Pres. McMinnville, Tenn.

## 1946 • SPRING • 1947

Send us your want list.

**Apple, Peach, Plum, Apricot,  
Grapes, June-bud Peach.**

**Shade Trees and Ornamentals.**

**Commercial Nursery Co.**  
DECHERD, TENN.

## WE OFFER...

**Our General Line of**

## SMALL FRUIT PLANTS

Let us quote on your requirements.

**L. J. RAMBO'S WHOLESALE NURSERIES**  
Bridgman, Michigan

## 200,000 ROSEBUSHES

2-yr. Budded Stock

Good standard and patented varieties. Individual packing for counter trade if desired. Bundles of ten or carloads.

Write for our wholesale price list.

**M. OLIVER FLOWER FARMS**  
Box 66 Tyler, Texas

## NORTHERN-GROWN LINING-OUT STOCK

Even grade, grown in peat-prepared beds. Handled and packed to reach you in perfect condition. Evergreen seedlings are scarce and will be for some time. While 2-yr. seedlings are not so easy to handle, any good nurseryman knows that the best transplants come from 2-yr. seedlings. Evergreens ready September 1 to 20. Maples, October 10.

Black Hills Spruce, 2-yr., 2-in. seedlings .....	Per 1000 \$15.00
Colorado Blue Spruce, 2-yr., 2 to 4-in. seedlings .....	25.00
Douglas Fir, 2-yr., 2 to 3-in. seedlings .....	30.00
American Arborvitae, 2-yr., 2 to 3-in. seedlings .....	20.00

BARBERRY THUNBERGI SEEDLINGS	Per 1000
4 to 6 ins. ....	\$12.00
6 to 8 ins. ....	20.00

### HARD or SUGAR MAPLE

6 to 8 ft., branched .....	Per 100 \$40.00
8 to 10 ft., branched .....	60.00

1000 Black Hills Spruce, 4-yr. tr., 4 to 6 ins. ....	Per 1000 \$60.00
500 Colorado Blue Spruce, 5-yr. tr., 6 to 10 ins. ....	Per 100 \$ 8.50
400 Canadian Hemlock, 4-yr. tr., 8 to 12 ins. ....	25.00
200 Canadian Hemlock, 4-yr. tr., 6 to 8 ins. ....	15.00
200 Fraser's Fir, 4-yr. tr., 6 to 12 ins. ....	10.00

Satisfaction guaranteed. Cash with order, please.

## J. R. PALMER & SON

Blackduck, Minn.

## WRITE US ABOUT—

- Evergreen Liners
- Shade Trees
- Specimen Evergreens
- Flowering Shrubs
- General Assortment of Stock.

## SHERMAN NURSERY CO.

Charles City, Iowa

## EVERGREENS

Lining-out stock  
For fall 1946 and spring 1947.  
Write for list.

SUNCREST EVERGREEN NURSERIES  
Johnstown, Pa.

Book orders early.

## SPECIMEN EVERGREENS SNEED NURSERY COMPANY

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Oklahoma City, Okla.

## SMALL FRUIT PLANTS

Evergreens — Shrubs  
Asparagus — Rhubarb  
Send for Complete Trade List

W. N. SCARFF'S SONS  
NEW CARLISLE, O.

it is known on the west coast today is quite different from the lawn of colonial times, according to the speaker. He said there are records of rye grass being sent from England to George Washington about 1760, but that such grasses were primarily for pastures. There were no lawn mowers then, and such lawns as there were, were sickle-mowed, leaving a turf that was six or eight inches long and rather rough. The grass was probably never watered. According to Mr. Ramsey, it was not until after the Civil war that lawns as we know them were developed. Then, as now, lawns were used as the foreground and foundation for the landscaping of a home.

There are about 1,500 kinds of grasses, but in common usage in the United States there are now only bents, poas (bluegrass), fescues, redtop, clover and Bermuda grass. Of these, the best in the San Francisco bay area is bluegrass. Of the bents, Mr. Ramsey recommended colonial bent (which he said is Astoria bent), highland bent, which is a deep-rooted bent and thus better suited to drier areas, and seaside bent, which is the grass used almost universally on golf greens. He said that seaside bent is a good kind, but that as it is a creeper, it requires more care in top dressing and mowing than any of the others, and unless one is able and willing to devote a large amount of time to the care of the lawn he could not recommend seaside. Redtop, which many were surprised to learn is also of the bent family, is a tough grass, recovering after rough use and adapting itself to either wet or dry conditions. It will do well in either a light or a heavy soil.

The fescues were also recommended for local conditions. The fescues were originally a European pasture grass. The straw also was used for the packing around dishes shipped to foreign ports. This straw, of course, had on it some viable seeds, and in New Zealand a Mr. Chewing noted a few plants of volunteers which seemed to be a good strain. He increased the plants from this strain and, after using the strain as a pasture grass for some time, sold it as a lawn grass. It found its way to England under his name and is now used for turf there on tennis courts. It came to this country from England, and most of the seeds for domestic consumption are grown in Oregon. There is a creeping fescue which is a light green, as compared to Chewing's fescue, and it is becoming an important strain in this country. The ryes originated in Italy and were largely annuals, but perennial strains have been developed, and

# FALL BULBS

IMPORTED  
DIRECT FROM HOLLAND

TULIPS  
HYACINTHS  
NARCISSUS  
CROCUS  
SNOWDROPS  
SCILLA

Send for Price List

## WILLIS NURSERY CO.

Ottawa, Kansas  
Wholesale Nurserymen

## To The Wholesale Trade

We have the following items to offer:

Apple, 1 and 2-year-old  
June-budded Peach  
Lining-out Peach  
Pear, 1 and 2-year-old  
Plums, Apricots and Damson

We welcome inquiries, and let us furnish your needs.

## FRAZIER NURSERY CO.

Box 1

Smithville, Tenn.

## BLUEBERRY PLANTS

are our specialty  
1, 2 and 3-yr.-old  
Special prices in  
Wholesale Lots for  
Fall Delivery

Write for prices to the

AIRLINE BLUEBERRY FARM  
606 Butterfield Drive  
EAST LANSING, MICH.

## We wish to purchase...

Evergreens, Fruit Trees,  
Shrubs, etc.

Send your surplus list to

THE PONTIAC NURSERY CO., Romeo, Mich.



**CUTLER & DOWNING CO.**

BENTON HARBOR, MICH.

**Wholesale Small Fruits**

<b>Reds</b>	<b>Blacks</b>
Latham	Cumberland
St. Regis	New Logan

**Dewberries****Blackberries**

Eldorado	Blowers	Alfred
----------	---------	--------

**Currants****Boysenberries**

Thorny	Thornless
--------	-----------

**We suggest early orders.****CUTLER & DOWNING CO.****KELLY  
FRUIT TREES**

1-yr. Pear

1-yr. Plum and Peach  
Apricot

California Lovell Peach Pits

Write for prices.

**KELLY BROS. NURSERIES, INC.**  
Dansville, N. Y.**SMALL FRUIT PLANTS  
and  
VEGETABLE ROOTS**We grow for the whole-  
sale trade only.**KRIEGER'S WHOLESALE NURSERY**  
BRIDGMAN, MICH.

most of those used in California are of the latter group.

In closing, Mr. Ramsey mentioned several lawn substitutes, such as dichondra, which he said was popular for a time but is almost nonexistent now; St. Augustine grass, which is grown to a limited extent in dry areas, and Flawn. Flawn is one of the newest lawn substitutes and, according to Mr. Ramsey, is an excellent material. However, it is not to be recommended in the bay area, as it turns brown in the winter months. He predicted it would have wide acceptance in semi-tropical areas.

Clyde Stocking gave an interesting though brief report of the American Association of Nurserymen convention at Miami Beach, which he attended with Ray Hartman and Jack McDonnell. Arthur Navlet acknowledged the receipt of a letter from the Central California chapter which was addressed to the Oakland flower show committee and gave constructive suggestions for improvements on the annual Oakland flower show. He said the letter would be carefully considered by the committee and that he felt sure all would benefit from the changes that would be made because of it.

Charles Burr acted as secretary of the meeting in the absence of Jule Christensen, who is in Denmark. Ray Burr reported that the entertainment committee of the state association had completed arrangements for the annual convention at Berkeley, September 23 to 25, and he felt sure everyone would have a good time.

It was reported that the state department of agriculture had completed all details for pinto tag certification in the bay area, and nurserymen should now make formal application for pinto tag inspections.

The next meeting will be held at the Green Hills Country Club, Millbrae, September 12. Those who care to play golf should make their own arrangements. W. B. B.

**TRI-COUNTY MEETINGS.**

The fiftieth meeting of the Tri-County chapter of the California Association of Nurserymen was held July 26 at the Pierpont Inn, Ventura.

President Walter J. Knecht invited everyone present to attend a flower show held at Ventura Junior College, July 26 to 28. Mrs. Arthur Verhelle and Bert T. Kallman reviewed the plans for the chapter's annual barbecue held at Santa Barbara, August 8.

The revised constitution and by-laws of the Tri-County chapter were read and adopted. The following changes were made: (1) The chapter

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1946-47 SEASON**

**RED RASPBERRY**, No. 1 Suckers and Transplants. Specializing in **Indian Summer**, **Taylor and Chief**. We can at last offer the **Indian Summer Everbearer** in quantities to warrant your featuring them to your trade.

**BLACK AND PURPLE RASPBERRY**, best varieties in No. 1 tips.

**GRAPEVINES**, all common varieties in 2-yr. No. 1 and 1-yr. No. 1.

**BLACKBERRIES, CURRANTS** and other small fruit plants.

**H. E. CONGDON NURSERY**

North Collins, N. Y.

**NURSERYMEN**

We are now booking orders for fall shipment.

**2-year Apple;**

Also 1-year Apple

1-year Peach

June-bud Peach

1 and 2-year Grape

Privet

Red Raspberry

Black Raspberry

Blackberry

Dewberry

Boysenberry, regular and thornless

Youngberry

Also other items. Write for prices.

**ROLLERS WHOLESALE NURSERY**  
Rogers, Ark.**RED LAKE CURRANTS  
RED RASPBERRIES  
Hansen's BUSH CHERRY  
PARADISE ASPARAGUS****ANDREWS NURSERY  
CO.  
FARIBAULT, MINN.****FRUIT TREES  
AND  
SMALL FRUITS****HARRISON BROTHERS NURSERIES**G. Hale Harrison, General Manager  
BERLIN, MARYLAND

shall have the power to suspend or expel any member of the chapter for nonpayment of dues or for conduct which tends to bring disrepute upon the name of the California Association of Nurserymen or upon the nursery industry, and (2) the secretary-treasurer shall give a financial report at each meeting.

Clarence Mets announced the nominating committee's selections for officers for the ensuing year, which were elected, as follows: President, C. Mavro Warren; vice-president, Jack Hume; secretary-treasurer, L. T. Clearwater.

President Knecht introduced Jack Lincke, executive secretary of the state association, as the speaker of the evening. Mr. Lincke reviewed some of the problems confronting the nursery industry and pointed out possible solutions.

To celebrate the opening day, August 8, of the traditional Santa Barbara fiesta, eighty members and guests of the Tri-County chapter of the California Association of Nurserymen enjoyed a steak barbecue at the home of Mr. and Mrs. Arthur Verhelle. Musical entertainment was provided by Channon Gelsin, Mitzi Dudas, Eben Coe and Noel Cravat. Bert T. Kallman, Mr. and Mrs. Jack Hume and Mr. and Mrs. Lee Sharman were in charge of the barbecue.

Among the guests of the Tri-County chapter were Finlay MacKensie, superintendent of parks at Santa Barbara; Paul Moulder, president of the California Association of Nurserymen, and Peter Riedel, horticulturist.

After the barbecue, President Walter J. Knecht called the group together to thank Mr. and Mrs. Verhelle and to discuss briefly with the nurserymen plans for future activities.

Karl W. Opitz, Sec'y.

### CALIFORNIA NOTES.

The Atlas Fertilizer Co., Colma, which has been limiting its production to one item, is expanding and will make available several different types of fertilizers within a few weeks. One new item is dried and composted coffee chaff. Coffee chaff is primarily a source of organic matter and is comparable to peat for nursery purposes. The company is operated by three brothers, who are now all discharged from the armed services. Dan Gavin is president of the firm.

Albert Wilson, who acts as a professional adviser to several bay area nurseries, is heard regularly on station KPO Sunday at 9:40 a. m. His talk is entitled "How Does Your Gar-

## STRAWBERRIES — CANEBERRIES

To the wholesale trade we offer the following varieties of small fruit plants for delivery after October 15. All prices F.O.B. shipping point.

### STRAWBERRIES

STANDARD VARIETIES	Per 100	Per 250	Per 1000
Blakemore, Dunlap, Aroma.....	\$1.25	\$ 2.50	\$ 7.50
Klondike, Missionary .....	1.40	2.75	8.50
Klonmore, Premier, Fairfax, Catskill.....	1.50	3.00	9.50
Tennessee Supreme, Tennessee Shipper.....	1.60	3.10	10.00

### EVERBEARING VARIETIES

Progressive .....	1.75	3.40	12.00
Gem, Mastodon, Evermore.....	2.50	5.50	17.00
Gemzeta .....	4.00	9.00	25.00
Streamliner .....	6.50	12.00	40.00

### CANEBERRIES

Youngberry .....	6.00	14.00	50.00
Regular Boysenberry .....	6.50	15.00	55.00
Thornless Boysenberry .....	7.50	16.00	60.00

Cold storage available for late spring orders.

Packing-out service available direct to your customers under your tags. No charge made for packing or packages.

## LEAMON STRAWBERRY NURSERY

Route 1

Ooltewah, Tenn.

Located in the highlands of east Tennessee.

## NATIVE AZALEAS

Our fall price list of nursery-grown stock does not include native plants that we have offered before, and we ask that you write for prices on such material. Our specialty has been NATIVE AZALEAS and our many customers will please order from the following quotations:

AZALEA CALENDULACEA (Flame Azalea) and AZALEA NUDFLORA (Pinxterbloom Azalea)	Per 10	Per 100	Per 1000
6 to 12 ins., lining-out.....	\$0.80	\$ 6.00	\$ 50.00
12 to 18 ins., lining-out.....	1.20	10.00	85.00
12 to 18 ins., with buds.....	2.50	20.00	175.00
18 to 24 ins., with buds.....	4.00	35.00	300.00
2 to 3 ft., with buds.....	6.00	50.00	450.00

EXTRA-QUALITY SELECTED PLANTS DUG B&B at the following prices:

	Per 100	Per 1000
12 to 18 ins., with buds.....	\$ 9.00	\$ 75.00
18 to 24 ins., with buds.....	12.50	100.00
2 to 3 ft., with buds.....	15.00	125.00
3 to 4 ft., heavy, with buds.....	25.00	200.00

Packing free on bare-root stock when cash in full is sent with order. Packing at cost, extra on B&B plants, except bulk car or truck loads. No charges on car or truck loads. C.O.D. orders must be accompanied by 1/3 cash. We are prepared to make truck delivery to your nursery on a reasonable mileage basis.

## O. H. PERRY NURSERY CO.

McMinnville, Tenn.

## STRAWBERRY PLANTS

### IOWA-GROWN

Streamliner Everbearing  
Gem Everbearing

Evermore Everbearing  
Senator Dunlap Premier

Our varieties are true and unmixed. We promise careful packing and prompt shipment. In season we are equipped to supply large orders of freshly dug plants on short notice. We would be glad to quote you on a few thousand or several million.

C. D. WRIGHT,

Hamburg, Iowa

### WASHINGTON ASPARAGUS ROOTS

1-yr. and 2-yr.  
Raspberries, Red and Black  
Grape Cuttings

The above in quantity lots.

THE PAW PAW NURSERIES

Paw Paw, Mich.

### RHUBARB

Chipman's Canada Red

25,000 No. 1. divisions

BASS NURSERY

Chadron, Neb.

den Grow?" and is said to be one of the most popular of the garden programs.

W. B. Clarke, of W. B. Clarke & Co., San Jose, celebrated his seventieth birthday anniversary with a family party, August 8.

A. L. Taylor, nematologist with the United States Department of Agriculture, has been visiting in California on official business.

The Santa Ana Perennial Gardens have moved to new headquarters at Arcadia which will include a new flower shop, to be known as Santa Ana Gardens Florist Shop.

The Little Nursery, Huntington Park, has been taken over by H. M. DeVries and will be known as the Huntington Park Nurseries.

Joe and Frank Garibaldi, who operate the Garibaldi Nursery, Colma, are confined to their beds. Joe is at home, and Frank is in the hospital.

Scientists at the Connecticut agricultural experiment station have tested approximately 6,000 chemicals for possible uses in the control of plant diseases.


Crown gall in nurseries and orchards is being controlled in many cases with penicillin.

Many of the peach virus diseases, known as the X-virus diseases, are being controlled in an experimental way by injecting sulphur drugs hypodermically into the stems of seedlings. In one test 100 per cent immunity was obtained in later-inoculated trees while eighty-five per cent of the untreated trees contracted the disease. Practical possibilities, if any, remain to be worked out, but if and when they are accomplished one of the greatest hazards and causes of loss to California peach growers will have been eliminated.

Gardeners, designers and workers at Golden Gate park, San Francisco, are ankle-deep in plans and young plants preparatory to making blue and gold replicas of the American Legion emblem for the Legion convention, which will be held at San Francisco in September. Over 5,000 plants have already been set, according to Julius Girod, superintendent of the park. The plants all are being grown in the park's own nurseries.

F. Lagomarsino & Sons, Sacramento, have announced that plans for the erection of a \$175,000 seed store and nursery are completed. The new store will be away from the downtown area, where the firm has been located for over fifty years.

Streptomycin, one of the wonder drugs known as antibiotics, seemingly will control the black spot disease of peaches, according to Dr. J. G. Brown, of the department of plant pathology



**CARSCALLEN NURSERY LABEL COMPANY**

### ALUMINUM LABELS

We have just produced a new plant label made of aluminum. It is sturdy, bright, and will not tarnish. Dress up your plants with good looking labels—Your name and address printed in 3 lines—1000 \$6.00, 5000 \$27.50, 10,000 \$55.00—

F.O.B. Pasadena—30 days delivery.

**Carscallen Nursery Label Company**  
65 West Union, Pasadena, California

## SOME ITEMS WE OFFER FOR 1946-1947

Fruit Trees in Variety

Seedlings—Apple, Pear, Shade Trees

Dwarf Fruit Trees	Chestnuts	Espalier Trees
Filberts	Grapes	Walnuts
	Shade and Flowering Trees	Small Fruits
	Shrubs—Deciduous and Broad-leaved	
	Conifers	Vines

Catalog ready in September.

Retail catalogs in color available to the trade at cost.

40-page general catalog, 30c.

32-page bulb and rose catalog, 25c.

**RICH & SONS NURSERY**

Route 4

Hillsboro, Ore.



**SHERWOOD NURSERY CO.**  
EVERGREENS - Propagators & Growers  
141 S. E. 65th Ave., PORTLAND 16, ORE.

### NOTICE

Limited production makes it impossible to book orders for new customers.

**HOWARD ROSE COMPANY**  
Hemet, California

## PACIFIC COAST NURSERY

2244 N. Skidmore Ct.  
Portland 11, Oregon

Pioneering Seedling Growers on the Pacific Coast since 1914.

Specializing in Fruit Tree Seedlings, Anglers Rooted Quince Cuttings, and Rooted English Privet, Norway Maple, 3-yr., and E. W. Birch, 3-yr. bra.

We have a surplus of Apple Seedlings, straight and branched, that are very nice. We have a nursery in Oregon and one in Washington, and we will appreciate it very much if any nurserymen coming from any part of the U. S. to the West will stop and visit us. We will be glad to take our time and show them our nursery and places of interest.

John Holmason & Sons, Props.

## BALED SHINGLE TOW

(CEDAR SHAVINGS)

**WM. A. JOHNSTON**

408 Postal Bldg., Portland 4, Ore.



## SHINGLE TOW

(Baled Cedar Shavings)

**MONARCH SHINGLE CO.**

P.O. Box 37 - North Portland Ore



of the University of Arizona. Black spot is a bacterial infection of the fruit, leaves and twigs of peaches, nectarines and plums and is a serious disease in some commercial orchards in California.

Nurserymen report the interest in fall and winter flower and vegetable gardens over the state is higher than ever before.

Agricultural uses for petroleum products, in addition to use for tractors and other power equipment, include flame weeding, which is becoming increasingly important in California; cotton picking, tobacco curing, hay drying, wood preserving and spraying. The petroleum industry, for its part, uses more than 40,000,000 pounds of farm products in manufacturing its specialties. W. B. B.

STANLEY W. WALTERS has purchased the remaining stock of the Albert Nursery, Olympia, Wash., and has started Walter's Nursery at Puyallup, Wash.

THE GREEN ARROW NURSERY, Van Nuys, Cal., has been purchased by William J. Powell, former manager of the Garden Supply Co. and Toluca Lake Nursery. Erich Regan, who established the nursery seven years ago, is retiring because of ill health.

HOLLY DELL NURSERY, Oak Grove, Ore., has been purchased by Mr. and Mrs. R. P. Farrington from Mr. and Mrs. L. J. Caufield. The nursery includes three acres of choice holly, from which cut holly has been shipped to all parts of the United States. Mr. Farrington expects to propagate camellias on an extensive scale.

FORTUNATO and JOHN PODESTA, who for more than thirty years operated the Green Valley Nursery at Colma, Cal., as a partnership, have dissolved the partnership. Fortunato Podesta, who owns twenty-four acres near Palo Alto, will operate from the peninsula. He now has gladioli and chrysanthemums on a part of the land. John Podesta will operate the nursery at Colma.

ATTENTION is called by R. R. Williams, proprietor of the Puget Sound Nursery and the Garden Shop, 9201 Pacific avenue, Tacoma 4, Wash., that his firm is quite separate from that whose establishment was reported in these columns several months ago, the Puget Sound Nursery & Landscape Architect Co., 3805 Southwest Thirtieth avenue, Seattle, Wash., formed by D. W. Branconier and Constine Cella.

## PORTLAND WHOLESALE NURSERY CO.

306 S. E. 12th AVENUE Avery H. Steinmetz PORTLAND, OREGON

### Quality Stock

CONIFERS AND BROAD-LEAVED  
EVERGREENS  
SHADE AND FLOWERING TREES  
FRUIT TREE SEEDLINGS  
FRUIT TREES  
DECIDUOUS SHRUBS  
VINES AND BULBS  
PORTLAND ROSES

Advance sales have depleted our stock to the point where we do not expect to issue a fall catalog as planned.

Our growing season has been most favorable, but the demand far exceeds the supply for this season.

*Write for our Catalog*

### A. MCGILL & SON

FAIRVIEW, OREGON

*Wholesale Only*

#### GOOD WESTERN-GROWN NURSERY STOCK

Fruit Tree Seedlings  
Flowering Ornamental Trees  
Shade Trees

Grown right and packed right.

Combination carloads to Eastern distributing points will save you on freight.

### MILTON NURSERY CO.

A. Miller & Sons, Incorporators

MILTON-Since 1878-OREGON

#### OUR SPECIALTIES

Growers of  
General Line of  
Nursery Stock.

Oregon and Oregon-Grown  
Apple and Pear Seedlings,  
Angers Quince Rooted  
Cuttings.

Combination Carloads to Eastern distributing points at minimum freight cost.

### DOTY & DOERNER, Inc.

6691 S. W. Capitol Highway

Portland 1, Oregon

*Wholesale Growers  
of  
General Nursery Stocks*

1 carload specimen Dwarf Boxwood 18 and 24 ins.

Tree Hedge Box, 24 to 30 ins. and smaller.

100 Parneyl Cotoneasters

150 English Yew, 4 to 5 ft.

150 Native Azaleas

100 Euonymus Japonica

400 Named varieties of Rhododendrons

300 Nandinas

300 Green Aucubas

Plenty of fine Camellias and other fine shrubs.

The above listed are all landscape size.

**F. A. DOERFLER & SONS**

Salem, Ore.

### AS ALWAYS— OREGON'S BEST SOURCE of GOOD ROSES

Limited crops reserved for established customers.

**PETERSON & DERING**

*Wholesale Rose Growers  
Scappoose, Oregon*

If it's APPLE or PEAR  
SEEDLINGS or Chinese  
Elm Seedlings you want,  
write us.

Dependable growers  
of quality stock.

**WASHINGTON NURSERIES**

Toppenish, Wash.

## CLASSIFIED ADS

Five lines, \$1.00,  
each additional line 20 cents,  
per insertion.

### BERRY PLANTS

**CULTIVATED BLUEBERRY PLANTS**—New Jersey-grown. Home of cultivated blueberries. Were originated in this state. More blueberries grown in this state than the entire U. S. Ship in latter Sept. until Nov. 15. One-yr. varieties: Rubel, Jersey, Rancocas, Cabot, \$20.00 per 100; \$190.00 per 1000. One-yr. Dixi, Atlantic, Pioneer, Pemberton, Weymouth. Prices quoted. 2-yr., 10 to 12-in. height, \$50.00 per 100. 2-yr., 12 to 15 in., \$60.00 per 100. Varieties, 3-yr., \$85.00 per 100, Concord, Jersey, Burlington, Rubel, Rancocas. Many inquiries and orders being received. Great demand. Shipping all over.

**WARREN SHINN, Root Specialist,**  
Woodbury, N. J.

**POT-GROWN STRAWBERRY PLANTS**, June bearers, \$8.00 per 100; \$75.00 per 1000. Varieties: Blakemore, Fairfax, Chesapeake, Dorsett, Starbright and Big Joe. Fall bearers, \$9.00 per 100; \$85.00 per 1000. Gem and Mastodon. Plant now for good crop next spring. Pays well. Money in Strawberries.

**WARREN SHINN, Woodbury, N. J.**

**BLUEBERRY PLANTS**  
Orders being taken for fall 1946 delivery, 6 to 12 in., well rooted. Cabot, Rancocas, Jersey, Rubel, Concord, \$25.00 per 100, \$225.00 per 1000. Quotations on other sizes on request.

**JOSEPH G. O'NEILL**  
P. O. Box 32 Moorestown, N. J.

**CHIEF RED RASPBERRY PLANTS**—Fall 1946 delivery. Top grade, \$45.00 per 1000; No. 1, \$35.00 per 1000; No. 2, \$25.00 per 1000. Delivery Oct. 16 to Nov. 1. Strong, hardy, well rooted northern Minnesota-grown stock.

**THIEF RIVER FALLS NURSERIES,**  
Thief River, Minn.

Stocky, well rooted **STRAWBERRY PLANTS**, Aroma, Blakemore, Klondike, Dunlap, Premier, \$6.00 per 1000. Mastodon Everbearing, \$7.00 per 1000. F.O.B. McMinnville, Tenn. **SAM PACK & SONS, R.F.D. 5,** Smithville, Tenn.

### BULBS

**WHOLESALE PRICES OF CANNA BULBS**, \$6.00 per 100, \$50.00 per 1000.  
Hungaria, tall, pink; Wyoming, yellow; King Humbert, red; Yellow King Humbert, yellow; President, red; Pennsylvania, orange and red.

**FALL WHOLESALE PRICE LIST ON HOLLAND BULBS**  
**DARWIN TULIPS**, 11 to 12 cm., \$5.00 per 100  
Bleu Amable, violet-blue  
William Pitt, red  
La Tulipe Noire, brownish-black  
Helen Eakin, white  
Dresden China, light rose  
Rose Copland, bright rose-pink  
Sunklat, yellow  
Fride of Haarlem, red  
Mascothe, salmon-orange  
Afterglow, apricot and orange  
Bartigon, red  
Yellow Giant, yellow  
William Copland, lavender  
**HYACINTHS**, 16 to 17 cm., \$12.50 per 100  
Gertrude, pink  
L'Innocence, white  
Bismarck, blue  
City of Haarlem, yellow and orange  
King of the Violets, purple  
**CROCUS**, \$2.00 per 100  
King of the Blues, blue  
King of the Whites, white  
Golden Yellow, yellow  
Striped Beauty, blue and white  
**BENTON COUNTY NURSERY CO.**  
Rogers, Ark.

### DAY LILIES

**Hemerocallis Kwanso Florepleno**. The only double Day Lily known. Prize winner Royal Horticulture Society. Large, double, rich golden-bronze flowers in July and August. \$15.00 per 100.

### IRIS KAEMPFERI

The modern orchid of the gardens. The greatest gift of the Orient to the American gardener. Field-grown plants from divisions of choice varieties in mixed colors. Order now for early fall planting. \$15.00 per 100. Cash with order, please.

**BROOKFIELD GARDENS**  
Rt. 6, Delaware, N. J.

**CANNAS**—Select stock, 200,000 President, rich scarlet, 4 ft., green foliage, carefully grown under our personal supervision, guaranteed true to name. Strong, 2 to 5-eye divisions, liberally graded, \$5.00 per 100, \$50.00 per 1000.

**MRS. CHARLIE ROBINSON, Greenville, Ga.**

### DOUBLE TIGER LILY BULBS

Per 100  
3 to 4-in. circumference.....\$ 6.50  
4 to 5-in. circumference.....8.50  
5 to 6-in. circumference.....10.00  
6 to 7-in. circumference.....15.00  
**THE EVERGREEN NURSERIES, Lowell, Ind.**

### BLACKBERRY LILIES

(Belamcanda Chinensis)  
Rare and beautiful, rich orange blossoms, followed by berries. \$2.00 per doz. \$10.00 per 100.

**MRS. CHARLIE ROBINSON, Greenville, Ga.**

### HEMEROCALLIS

Rajah, Mikado, Geo. Yeld, Imperator, J. A. Crawford, Mrs. Wyman. Sept. delivery. 10 for \$2.00; 25 or more at 15c each.

**ELWOOD GARDENS**  
5408 Harrison, Kansas City 4, Mo.

**DAFFODILS**, large hardy, well balanced mixture of Golden Spur, Orange Phoenix, Von Sion, Tenby Obvallaria, White Lady, Jonquil Orange Queen, Georgia-grown. \$25.00 per 1000, F.O.B. **MRS. RUTH GABLE,** Harlson, Ga.

**DAFFODIL BULBS** for fall planting. Old-fashioned mixture (not labeled), 10 for \$1.00. Limited supply King Alfred, 5 for \$1.00. Postpaid. **NARCISSUS NURSERY, Flora** Webster, Prop. R. D. 2, Genesee, Pa.

### EVERGREENS

**CAMELLIA LINERS**, 2½-inch pots. Shipment Sept., Oct., Nov.

Eureka, red	.....	\$0.30
Rosita	.....	.30
Valvareda	.....	.30
Covina	.....	.35
Dora McCarter	.....	.35
Madame LeHois	.....	.35
Amabilis	.....	.40
Nobilissima	.....	.40
Otome Red	.....	.40
Purity	.....	.40
Princess Bacciochi	.....	.40
Fanny Holis	.....	.50
Elena Noble	.....	.50
Caprice	.....	.45
Panache	.....	.45
Hugh Evans	.....	.50
Jordan's Pride	.....	.50
Rose Queen	.....	.50
Ella Drayton	.....	.55
Daikagura	.....	.55
Rhapsody	.....	.55

Order now for full selection. Packing at cost. Send for our trade list of Camellias, Rhododendrons, Azaleas and other liners.

**L. E. COOK, JR.**  
417 Vista St., San Gabriel, Cal.

**SEEDLINGS** Age Size Per 1000  
Banks Pine .....2-yr. 4 to 6 ins. \$16.00  
Banks Pine .....3-yr. 5 to 12 ins. 20.00  
Pitch Pine .....3-yr. 3 to 5 ins. 15.00  
Pitch Pine .....3-yr. 6 to 15 ins. 18.00  
Pitch Pine .....4-yr. 8 to 20 ins. 20.00  
Ponderosa Pine .....2-yr. 3 to 5 ins. 15.00  
White Pine .....2-yr. 3 to 5 ins. 20.00  
Colorado Bl. Spruce 4-yr. 4 to 8 ins. 30.00  
Engelmann Bl. Spruce 3-yr. 3 to 5 ins. 20.00  
Douglas Fir .....2-yr. 3 to 6 ins. 20.00

**TRANSPLANTS** Age Size Per 1000  
Banks Pine .....1-1 3 to 5 ins. \$18.00  
White Pine .....2-1 3 to 5 ins. 22.00  
Colorado Bl. Spruce 2-1 3 to 5 ins. 40.00  
Engelmann Bl. Spruce 2-1 3 to 5 ins. 40.00  
Norway Spruce .....2-1 3 to 5 ins. 35.00  
White Spruce .....2-1 3 to 6 ins. 30.00

**SAM E. DIBLE, Shelocka, Pa.**  
C. B. C. Nursery Agent

Per 100 Per 1000  
1000 Am. Arborvitae. 12 to 15 ins. X .....\$16.00 \$125.00  
500 Can. Hemlocks. 6 to 10 ins. X .....11.00 ....  
300 Can. Hemlocks. 8 to 12 ins. X .....15.00 ....  
250 Can. Hemlocks. 12 to 15 ins. X .....25.00 ....  
100 Am. Holly. 1½ to 2 ft. XX, Br. ....35.00 ....  
2000 Andorra Juniper. 8 to 10 ins., rooted ctgs. ....11.00 95.00  
1000 Andorra Juniper. 8 to 10 ins. X .....12.50 115.00  
Good quality; free packing; shipped prepaid. 3000 Evergreens in B&B. Assorted varieties.

**WHERRY'S NURSERIES, St. Marys, W. Va.**

### ROOTED EVERGREEN CUTTINGS

Well rooted. September delivery.

Per 100  
Chamaecyparis laws. altumi. ....\$ 5.00  
Chamaecyparis laws. azurea (new). ....12.00  
An extremely blue altumi. ....12.00  
Chamaecyparis laws. fletcheri. ....15.00  
Cunninghamia lanceolata (Chinese Fir) 15.00  
Cotoneaster parneyi .....12.00  
Juniperus comm. hibernica fastigiata. 8.00  
Cuttings were planted in early spring 1946 and left in sand in an open shaded frame all summer. 25 at 100 rate; minimum order \$4.00.

**MITSCH NURSERY**  
1235 Franklin St. Lebanon, Ore.

**Buxus, Suffruticosa**, 8 to 10 in., bushy, stout, bed plants, \$10.00 per 100.

**MRS. CHARLIE ROBINSON, Greenville, Ga.**

**NORWAY SPRUCE**—Specimens. Each  
7 to 8 ft. ....\$10.00  
8 to 9 ft. ....12.50  
9 to 10 ft. ....15.00  
10 to 11 ft. ....18.00

In truckload or carload lots.  
**TRI-STATE LANDSCAPE NURSERY**  
Outer Court ve. Phone 2-2990  
Evansville, Ind.

**300,000 BUXUS SUFFRUTICOSA**  
Most beautiful, true, old-fashioned, dwarf, heavy, round, compact, perfect shaped tops, carefully grown under our personal supervision; 8 years; 10 to 12-in. plants, \$50.00 per 100; 35c in lots of 1000 or more.

**MRS. CHARLIE ROBINSON, Greenville, Ga.**

**AMERICAN ARBORVITAE**  
I have a block of fine specimen plants of American Arborvitae, 3 to 4 ft. and 4 to 5 ft., 75c per foot.

**STATE ROAD NURSERY**  
State and Sprout Roads, Route 1, Media, Pa.

**EVERGREEN LNERs**  
Good assortment of seedlings and transplants in sizes up to 15 inches. List on request.

**BRADEN NURSERY**  
South Windham, Maine.

**HARDY LINERS** Per 100  
Canada Hemlock, 6 to 9 in., 2 tr. ....\$20.00  
Canada Hemlock, 9 to 12 in., 2 tr. ....25.00  
Zanthorhiza apifolia, rooted layers ....5.00

**CHAS. H. WILLIAMS NURSERIES**  
Box 223, Exeter, N. H.

**SPECIMEN TAXUS**  
See my Ad in this issue for some beautiful specimen Taxus. Also write or call about other specimen Magnolias, etc. Westbury 328. **JOHN VERMEULEN, Westbury, L. I., N. Y.**

**VINCA MINOR (Myrtle)**, 6 to 9 in., field-grown, ready for landscaping. \$10.00 per 100 clumps. State and federal inspection.

**SYLVANIA NURSERY & PEAT CO.**  
New Galilee, Pa.

**GRASS SODS**

We again solicit, after four years' absence, your **GRASS SODDING** contracts. No job too large or too small for us to handle.

**ABBOTT'S GARDEN SERVICE**  
Box 208, Flushing, N. Y.

**Surplus Stock**  
can be easily and quickly turned into Cash  
listing it in the  
**American Nurseryman Classified Ads.**

**HARDY PLANTS**

**YOUNG VIGOROUS PEONES**  
Per 100 Per 1000  
550 Marie Crousae .....\$45.00 ....  
400 Frances Willard .....45.00 ....  
400 Mme. Ducl .....35.00 ....  
1450 Mme. De Verneville .....35.00 330.00  
175 Sarah Bernhardt .....45.00 ....  
1750 La Perle .....35.00 30.00

The above stock is subject to prior sale and the usual trade terms and conditions. 3 per cent discount for cash with order. These are good 3 to 5-eye divisions.

**LITTLEFORD NURSERIES, Vincennes, Ind.**  
Northern-grown, 1-year, field-grown perennials.

Per 100  
Giant Pacific Delphiniums .....\$9.00  
Campanula med. ....6.00  
Digitalis Shirley .....6.00  
Carnation, Chabaud's .....6.00  
Dianthus alwoodi .....6.00  
Coreopsis, Dbl. Sunburst .....6.00  
Pansies, Bugnot's Giant .....4.00

**NORTH POLE NURSERY**  
Cornucopia, Wis.

**CHEERIO**  
An outstanding new Oriental Poppy. Beautiful bluish-pink with red spots at the base. Strong field-grown plants.  
\$3.50 per 10; \$30.00 per 100.  
250 or more at \$25.00 per 100.  
Many other varieties of Oriental Poppies available. Send for complete list.

**CARROLL GARDENS,**  
Westminster, Md.

**PEONIES**, 1000, 3 to 5-eye div.  
Edulis Superba, pink; Duc De Wellington, white; \$20.00 per 100. Francois Ortegat, red; Prea, Roosevelt, red, \$25.00 per 100. Mons. Jules Bie, shell-pink, \$20.00 per 100.

**WEST SIDE NURSERY, Watertown, Wis.**

**ORIENTAL POPPIES.**  
**HARDY PHLOX.**  
**CARNATION GREXADIN.**  
Write for trade list.

**FLOR-ACRES, Bridgman, Mich.**

**PERENNIAL VERBENAS.**  
Rich scarlet, Snow, pink and lavender. Large field plants. \$4.00 per 100, \$25.00 per 1000.

**MRS. CHARLIE ROBINSON, Greenville, Ga.**

**VIOLETS.**  
Sweet-scented blue, hardy, heavy bloomers; large plants, \$3.00 per 100, \$25.00 per 1000.

**MRS. CHARLIE ROBINSON, Greenville, Ga.**

# ROOTS

## PERENNIAL MULTIPLIER ONIONS

Top Sets  
10 lbs., \$2.50; 100 lbs., \$22.50  
THE EVERGREEN NURSERIES  
Lowell, Indiana

# SEEDS

Booking orders for following seeds freshly collected from tree to you. Per lb.  
Cornus Florida ..... \$0.50  
Magnolia Glauca ..... 1.50  
Ilex Opaca ..... .50  
Ilex Verticillata ..... .50  
Ilex Glabra ..... .50  
Aronia Arbutifolia ..... .50  
Aronia Melanocarpa ..... .50  
WM. J. WRIGHT, R. D. 1, Bridgeton, N. J.

PEACH PITS, southern collected, high germination, \$3.00 per bu. Peach, Plum, Apricot, fall delivery; 1-ft., 20c; 2-ft., 30c; 3-ft., 40c; 4-ft., 60c; 5-ft., 70c; 6-ft., 80c. Cash with order.  
RIVERDALE NURSERIES, Riverdale, Ga.

PEACH PITS—New Crop Lovell.  
1 to 5 bu., \$3.00 per bu. 5 to 25 bu., \$2.85;  
25 to 100 bu. \$2.75; 100 bu. up, \$2.50.  
WAYNESBORO NURSERIES, Waynesboro, Va.

RECLEANED ABRUZZI RYE.  
1 to 10 bu., \$2.85 per bu.; 10 bu. or more, \$2.75 per bu.  
WAYNESBORO NURSERIES, Waynesboro, Va.

If you don't find what you want try a Classified Ad under the heading "Wanted." It's cheaper than mailing out a want list.

# SHRUBS and TREES

ROSES—for fall 1946 and spring 1947 Delivery—ROSES.  
We offer subject to prior sale, 2-yr., field-grown Roses, budded on Multiflora Japonica. Shipments will start around December 15. We have a new storage building and we can ship when you want, up to MARCH 1. All orders accepted upon condition that they shall be void should injury befall the stock or conditions happen over which we have no control.  
All shipments delivered F.O.B. Springfield, Mo.

Cash with order, no packing charges. We will accept 50 per cent cash in advance, balance C.O.D., plus packing charges.  
Ami Quinard ..... K. L. Mock  
Antoine Riviere ..... J. A. Victoria  
Betty Grace Clark ..... Luxembourg  
Betty Uprichard ..... Margaret McGredy  
Caledonia ..... Pink Radiance  
Columbia, pink ..... Pres. Hoover  
Columbia, red ..... Red Radiance  
Druschki, red ..... Rouge Mallerin  
Etoile de Hollande ..... Roslyn, yellow  
Editor McFarland ..... Senior  
Edith Nellie Perkins ..... Syracuse  
E. G. Hill ..... Soeur Therese  
Elsie Poulsen, Poly. .... Talieman, regular  
Grenoble ..... Talieman, yellow  
Golden Salmon, Poly. ....

CLIMBERS.  
Cl. Briarcliff ..... Cl. Red Talieman  
Cl. Columbia ..... Dr. Van Fleet  
Cl. Mrs. P. S. du Pont Paul's Scarlet Climber  
Order from this ad.

Roses are grown right, graded right, packed right.

OZARKS PLANT FARMS, INC., Springfield, Mo.

1500 Paul's Scarlet Climber Rose, 2-yr., No. 1, budded on Multiflora Japonica rootstock, \$5.00 per 10; \$45.00 per 100.

25,000 Rosa Multiflora Japonica seedlings, 9-in. cuttings, well rooted, well branched 3/16 to 1/2 in., \$4.00 per 100; \$25.00 per 1000.  
100,000 Multiflora Japonica, thornless roses, 9-in. cuttings, \$8.00 per 1000.

3000 Spiraea Trichocarpa (Korean), 2-yr. No. 1, 2 to 3 ft., \$25.00 per 100, \$200.00 per 1000.

2000 French Pussy Willow (Salix Caprea), 2-yr., No. 1, 2 to 3 ft., well branched, well rooted, \$15.00 per 100.

FINGER LAKES NURSERIES  
404 Washington St. Geneva, N. Y.

MAHONIA AQUIFOLIUM, 4 to 6 ins., 1-yr. seedlings, \$5.00 per 100.  
MAHONIA REPENS, 2 to 4 ins., 1-yr. seedlings, \$5.00 per 100.  
Cash with order.

NORTH RIDGE NURSERY, Elyria, O.

ROSE SEEDLINGS.  
Multiflora Japonica understock, 1 year old, extra heavy, well rooted; large enough to be budded. \$125.00 per 1000. F.O.B.  
SOUTHLAND ROSE NURSERIES, Tyler, Tex.

DOGWOODS—Cornus Florida and Cornus Florida Rubra—All sizes from 6 ft. to 2-in. caliper. Thousands to select from. Wholesale only. EDWARD WETZEL NURSERY, State Rt. 84, Madison, Ohio.

PACHYRANDRA TERMINALIS, rooted cuttings, from sand, \$4.00 per 100, \$35.00 per 1000.  
GREENSTOCK NURSERY  
Box 7, Port Jefferson Station, L. I., N. Y.

HOLLAND-GROWN Azaleas, Rhododendrons, Juniper, Taxus, Thuja, Lilac, Magnolia, Peonies, Pyrethrum, Dicentra, Lilliums and a good list of useful nursery items, subject to the Netherlands' government regulated prices. JOHN VAN DER POL, Boskoop, Holland, represented by VAN Y NURSERY, M. Van Der Pol, owner, Fairhaven, Mass.

PRIVET, AMUR RIVER NORTH. 1-year cuttings. Per 1000  
6 to 12 ins. .... \$40.00  
12 to 18 ins. .... 60.00

Cash with order.  
NORTH RIDGE NURSERY, Elyria, O.

Blight-resistant Chinese Chestnut Trees, excellent strain, well rooted, good caliper. 3 to 4 ft., \$65.00 per 100, 2 to 3 ft., \$50.00 per 100.  
A. TOMS NURSERY, Port Deposit, Md.

# VINES

HALL'S HONEYSUCKLE (Lonicera Hallian Japonica)  
Strong No. 1, 2-yr., field-grown, 3 to 4 leads, 18 to 20 ins.; carefully graded, selected plants, \$4.00 per 100, \$30.00 per 1000; lighter plants, \$20.00 per 1000. Immediate shipment.  
MRS. CHARLIE ROBINSON, Greenville, Ga.

# MISCELLANEOUS

Wholesale prices for 1-year, No. 1 GRAPES  
Per 100 Per 1000 Per 10,000  
Concord ..... \$10.00 \$ 90.00 \$ 800.00  
Fredonia ..... 11.00 100.00 900.00  
Moore's Early ..... 11.00 100.00 900.00  
Campbell's Early ..... 11.00 100.00 900.00  
Delaware ..... 12.00 110.00 1,000.00  
Niagara ..... 11.00 100.00 900.00

CALIFORNIA PEACH SEEDS  
California Lovell Peach Pits from 1946 crop. Well cared for in drying. In bags of about 80 lbs. Each \$3.00 per bushel. In lots of ten and up, \$2.50 per bushel, F.O.B. Rogers, Ark.  
BENTON COUNTY NURSERY CO., INC. Rogers, Ark.

DELPHINIUM, Improved Gold Medal Hybrids, 2-yr.-old, field-grown, long fibrous roots, \$7.50 per 100; \$4.00 per 50.

RHUBARB SEEDS, Victory Strawberry and Mammoth mixed, 55c per lb. Divisions, No. 1, at 5c. Cash with order.  
SWEDBURG NURSERY  
Battle Lake, Minn.

Berry Plants, Garden Roses, Herbs. Send for list of above for fall planting.  
WARREN SHINN, Woodbury, N. J.

# SUPPLIES

CANE STAKES  
FOR POT PLANT GROWERS  
Now is the time to get the best DOMESTIC CANE STAKES. All dark green. Check this list now and send your order.  
HYACINTH STAKES, THIN.

Per 1000  
12 ins. .... \$5.50  
15 ins. .... 6.25  
18 ins. .... 7.15

STANDARD PENCIL THICKNESS.  
1 ft. .... 5.50  
1 1/2 ft. .... 7.15  
2 ft. .... 8.95  
2 1/2 ft. .... 11.75  
3 ft. .... 13.15  
3 1/2 ft. .... 14.30  
4 ft. .... 16.95

(Can also furnish 6 ft. Write for prices.)  
MEDIUM HEAVY.  
% to 1/2-in. (500 to bale.)

2 ft. .... 10.50  
2 1/2 ft. .... 12.50  
3 ft. .... 15.00  
3 1/2 ft. .... 16.00  
4 ft. .... 17.50  
5 ft. .... 22.70  
6 ft. .... 35.00

HEAVY TONKIN.  
1/2-inch and up. Per 100  
3 1/2 ft. .... \$3.00  
4 ft. .... 3.50  
5 ft. .... 4.50  
6 ft. .... 5.30  
7 ft. .... 5.95  
8 ft. .... 6.60

AMERICAN FLORIST SUPPLY CO.,  
1335 W. Randolph St. Chicago 7, Ill.

STAKES—Bamboo  
Carefully Selected—Dyed Dark Green.  
Uniform Pencil Thickness.

No. G-31 2 ft. Bale of 2000 ..... \$10.95  
No. G-32 2 1/2 ft. Bale of 2000 ..... 12.90  
No. G-33 3 ft. Bale of 2000 ..... 14.65  
No. G-34 3 1/2 ft. Bale of 2000 ..... 19.45  
No. G-35 4 ft. Bale of 2000 ..... 23.35

TONKIN STAKES—Bamboo  
Dyed Green—Medium Heavy.  
No. G-41 2 ft. Bale of 1000 ..... \$ 9.85  
No. G-42 2 1/2 ft. Bale of 500 ..... 7.75  
No. G-43 3 ft. Bale of 500 ..... 8.70  
No. G-44 3 1/2 ft. Bale of 500 ..... 11.95  
No. G-45 4 ft. Bale of 500 ..... 13.75  
No. G-46 5 ft. Bale of 500 ..... 17.70

We cannot break bales.  
Quantity discounts, 10 to 24 Bales, 5 per cent.  
25 Bales or more, 7 1/2 per cent.  
SCHUFF SUPPLY CO., Wilmette, Ill.

A. F. S. "EASI-OFF" WOOD PLANT BANDS  
Size in ins. Weight per 1000 Per 1000  
1 1/2 x 1/2 x 3/4, 15 lbs. .... \$1.35  
2 x 2 x 3/4, 15 lbs. .... 2.50  
2 1/2 x 2 1/2 x 3/4, 20 lbs. .... 4.30  
3 x 3 x 3/4, 21 lbs. .... 4.60  
3 x 3 x 3/4, 22 lbs. .... 5.20  
4 x 4 x 3/4, 40 lbs. .... 6.30

Packed 1000 to the carton. We do not break the cartons.  
LIGHT WOOD FLATS.  
For handling and shipping our 1 1/2-inch and 3-inch sizes of Plant Bands. Per 100

M-270; holds twelve 1 1/2-inch Bands ..... \$2.75  
M-390; holds twelve 2-inch Bands ..... 3.30  
M-392; holds twelve 2 1/2-inch Bands ..... 3.75  
M-393; holds six 3-inch Bands ..... 3.65  
M-394; holds six 4-inch Bands ..... 3.95  
Packed 100 to the carton. We do not break cartons. Shipped promptly from the factory in Michigan.

AMERICAN FLORIST SUPPLY CO.,  
1335 W. Randolph St. Chicago 7, Ill.

KNOCK-DOWN FLATS.  
Made from a good grade of Southern Yellow Pine, since Cypress is not available. Standard specifications, inside measurements.

15x12x3 1/2 ..... \$16.25 per 100  
16x14x3 1/2 ..... 20.50 per 100  
20x14x3 1/2 ..... 30.00 per 100  
20x14x3 1/2 ..... 33.00 per 100  
22 1/2 x15x3 1/2 ..... 22.00 per 100  
22 1/2 x15x3 1/2 ..... 25.00 per 100  
All other sizes quoted on request. Prices F.O.B. Birmingham.

We are manufacturers, not jobbers. Freight to any point is a small item per Flat. Our Flats are the best. Why pay more? Our quality guaranteed. Prompt shipment, any quantity. Attach check to order.  
NIGHTTOWER BOX & TANK CO.  
Birmingham, Ala.

FINE NO. 1 OR NO. 2 SCREENED PEAT.  
Acid pH 4.5. Some acid for Azaleas and Hydrangeas, also for mixing with soil for potting and seed flats. This Peat is very good for mulching Mum beds and mixing with soil for Snapdragon seed. Order early. Packed in 2-bu. bags, 5 to 24 bags, \$1.00 each; 25 to 49 bags, 95c each; 50 to 100 bags, 90c each. Bulk carload, about 60 yards or 600 bags, \$275.00 per car. We ship same day order received. Cash, please.

HAASE BROS.,  
116 S. Jefferson St. Peoria, Ill.

IMPORTED CANE STAKES  
Check your needs and order now.

Size Per 1000  
15 ins. .... \$3.50  
18 ins. .... 4.10  
24 ins. .... 5.40  
30 ins. .... 6.90  
36 ins. .... 8.30  
48 ins. .... 10.75

2000 per bundle.  
AMERICAN BULB CO.,  
1335 W. Randolph St. Chicago 7, Ill.

PROFIT WITH PERF-O-RAIN.

Rain when you want it—low pressure—rectangular strip watered—No overlap—No sprinkler heads or other gadgets—Portable lightweight pipe—Long life—Write for free folder. W. R. AMES COMPANY OF FLORIDA, 3905 E. Broadway, Tampa 5, Florida, or W. R. AMES COMPANY, 150 Hooper St., San Francisco 7, Calif.

CYPRESS PLANT STAKES.  
Unpainted, 6-feet long, not exactly square. Suitable for Dahlias, small trees and other heavy staking.

Averaging 1/2 to 1 inch in width, \$60.00 per 1000. F.O.B. New York. Minimum order, 250 stakes. Less 5 per cent quantity discount on 5,000 up.

McHUTCHISON & CO.,  
95 Chambers Street New York 7, N. Y.

MAGIC ELECTRIC WELDER, 110-volt AC-DC; welds, brazes, solders, cuts all metals; easy to use; full directions. Complete with power units, flame and metallic arc attachments, carbons, fluxes, rods, mask. Only \$19.95. Used by the Navy. Guaranteed one year. Splendid for nursery and farm use.

MAGIC WELDER MFG. CO.,  
241NA Canal St., New York, N. Y.

SOIL HEATING EQUIPMENT, designed by a grower and engineer, for commercial propagation. Cable, soil thermostat and pilot lamp to heat 20 sq. ft., \$11.40; 40 sq. ft., \$14.25; 60 sq. ft., \$17.10; 80 sq. ft., \$19.95, and 150 sq. ft., \$27.00. F.O.B. Seattle.

L. N. ROBERSON CO.,  
1539 E. 103rd St. Seattle 55, Wash.

TREE DIGGERS.  
For digging nursery-row-grown fruit and shade trees, shrubs, vines, hedge plants, rosebushes and ornamentals. Manufactured to be drawn by either horses or tractors. Further particulars upon request.

WILSON & SONS NURSERY CO.,  
Winnboro, Texas.

RUBBER. Your Rubber requirements are important. Know where to get it when you want it. Belts, rubber bands, boots, coats, gloves, hose, spray bulbs, aprons, budding strips. Get our price sheet and catalog today.

BROADWAY RUBBER MFG. CO.,  
Louisville 2, Ky.



**SPECIAL SALE**

Sphagnum moss, long fibered in standard burlap bales at \$1.55. Milled sphagnum moss for control of damping off in seed flats, etc., at \$1.55 per bag F.O.B. Floodwood, Minn.  
COLBY PIONEER PEAT CO., INC.  
Hantontown, Ia.

**PRINTING**

Letterheads, billheads, statements, cards, envelopes, tags, blotters, folders, catalogs, samples. Send copy for estimate.  
J. GARLAND HILL, Dept. A, Seaford, Del.

**SEED STORE FIXTURES**

Bins, Cabinets

**WALKERBILT**

Penn Yan, N. Y.

**SOIL HEATING CABLE** by "GRO-QUICK." Heavy duty cable now available, also thermo. Bottom heat can't be beat for rooting cuttings, for forcing. Get free instal. date. GRO-QUICK, 366 W. Huron St., Chicago 10, Ill.

**GIBRALTAR** Frost Covers pay for themselves. Economical, long-lasting, ideal for windbreaks, 6 ft. wide; 50 ft., \$13.75; 100 ft., \$26.00; 150 ft., \$39.00. NEW AMSTERDAM IMPORT, 122 Chambers St., New York 7, N. Y.

**COTTONETTE** Squares are best for balling. Saves time and twine. All sizes in stock. Write NEW AMSTERDAM IMPORT, 122 Chambers St., New York 7, N. Y.

**WANTED**

WANTED—Price per 1000 on:  
Acer Palmatum  
Corylus Americana  
Fagus, American or European  
Hamamelis Virginiana  
Magnolia Glauca or Kobus  
Seedlings for understocks.

ARTHUR DUMMETT  
63 Anderson Road  
Bernardville, N. J.

What have you to offer in Strawberry Plants, Grapevines, Raspberry Plants, Boysenberry Plants, lining-out stock Evergreens and Shrubs; fall and spring delivery; write us, Box 710.

E. W. TOWNSEND & SON NURSERIES  
Salisbury, Md.

WANTED — Colorado Spruces, blue and green, to be cut for Christmas trees, size 2 to 10 feet, need about 500. State price in ground or delivered. JOHN HOVERMAN & SONS, INC., State Hwy. Rt. 17, Rochelle Park, N. J.

WANTED—In even sizes, 16 to 18 ins., Black Hills Spruce, Colorado Blue Spruce, Norway Spruce and Douglas Fir. Desire an unlimited supply during entire fall season. CHALIN LEWIS NURSERY, Piggett, Ark.

WANTED—Liners and finished ornamentals for new nursery. Especially need all types of Magnolias. Please send price lists or catalogs. CHALIN LEWIS NURSERY, Piggett, Ark.

WANTED  
5000 Black Pine (Pinus Thunbergii) seedlings, or smaller number of trees.  
ASHMUT FARM  
Falmouth, Mass.

WANTED  
Red Barberry seedlings and 18 to 24-in. transplants. Also Floribunda Roses.  
J. W. GUSTAFSON  
Route 1, Crystal Lake, Ill.

WANTED  
Tree cones of Slash, White, Pitch and Sugar Pine; Norway Spruce, Hemlock, etc. Large quantities. Write PEESKILL NURSERIES, Shrub Oak, N. Y.

## INSPECT NEW YORK. EXPERIMENT STATIONS.

[Continued from page 11.]

stocks, such as No. IX. Apples on this stock should be set out 12x12 to 15x15 feet. Closer planting is not advised. The same variety on such vigorous understock as Malling No. XII and No. XIII should be set as far apart as 40x40 feet. Mr. Brase has warned that many apple varieties on Malling No. IX produce trees which are likely to fall over because of the small root system and large top. For this reason staking should be done.

The production of understocks was done in stool blocks. The soil is hilled up at the base of the stock by a special

tractor with two disks mounted at an angle which helps to hill up the soil at the base of the plants. In laying out a stool block area, Mr. Brase suggested it would be wise to plant the stock in a depression, so that the planting would be useful over a longer period of time. Each year some of the soil is pulled in around the roots and would gradually build up. New stocks are produced by a system of mound layering. The soil is pulled away in the fall of the year, and the rooted stems are cut off and stored for either planting early in spring, for budding in the summer or for winter grafting. During the process of grading, the tops of the understock are trimmed. These often can be treated as hardwood cuttings, and a reasonable number will root during the winter. Mr. Brase next showed East Malling No. IX used as an intermediate piece in a double graft. An understock of vigorous type is grafted to Malling No. IX. The variety is then grafted onto Malling No. IX. This grafting is all done in a single operation.

The understocks were propagated by mound layering, and Mr. Brase demonstrated new equipment developed for hilling up the soil around the plants in the spring of the year and subsequently as needed during the year. The soil is removed from the mound in the fall, and the rooted shoots are cut off from the mother plants. These are then graded, bundled and stored over winter. They are generally set out in nursery rows the following spring and budded during the following season.

Mr. Brase showed the nurserymen the results of some machine grafting done during the dormant season. In this case, vegetatively propagated understocks were used. The results were much more uniform than when the grafting was done on roots. The practice of double grafting was shown, in which the dwarfing stock was used as an intermediate piece between a vigorous rootstock and a vigorous-growing variety. Both grafts were made at one time, and the grafts had to be set above the soil level when the trees were planted. Commercial varieties on Malling No. IX understock often need to be supported by staking. Because of the small root system of the dwarfing understock, the weight of the crop in the top of the tree in certain soils will force it to topple over unless supported. The use of the intermediate piece in grafting overcomes this difficulty.

The attention of the growers was called to the effect of early defoliation of nursery stock in cherries, particularly on the survival of the plants

when set out the following spring. Nursery stock was defoliated by insect pests, and later other plants were defoliated by hand. Such plants dug, stored and set out in the spring in the usual way indicated much greater survival and better plants than those defoliated during the summer, or than from those grown until digging time in the fall before the leaves were removed.

Dr. R. W. Bledsoe, of the Geneva experiment station, spoke of the work he is doing in reference to storage of nursery stock. He showed not only the nursery storage cellars but also the results of storing cherries, peaches and apples at low temperatures until rather late in the spring. The plants appeared to be in perfectly good condition when taken from storage, but failed to grow satisfactorily in the field. The plants were stored at 33 to 35 degrees Fahrenheit, with sixty per cent humidity. Somewhat similar results were obtained when nursery stock was stored in atmospheres of unusually high carbon dioxide content.

After inspection of the research work in the nursery, Prof. Frank A. Lee, of the department of chemistry, gave the nurserymen a report on varieties of fruits adapted for both commercial and home freezing. Prof. J. C. Hening, of the same department, talked to the group about fruit ices and passed out samples of strawberry and raspberry fruit ices for their inspection. These were judged interesting and worth while. They offer a new outlet for fruit products when surpluses are again available.

In the evening, although the weather was not ideal, a demonstration of aerial dusting was given under the direction of Dr. F. L. Gambrell, of the department of entomology.

Although the weather was again unfavorable Saturday, August 17, a trip was made through Durand-Eastman and Highland parks under the leadership of William Pitkin, superintendent of the Rochester park system. The nurserymen who took the tour readily appreciated the wealth of plant material so adequately and effectively displayed in the Rochester parks. Mr. Pitkin explained the policy of rejuvenating the plant materials in the parks, and the appearance of the plantings adequately bore out his statements. Much needed thinning and pruning has been done, and many new plant materials have been set out.

**Business Meeting.**

The business meeting of the New York State Nurserymen's Association held at Ithaca, August 15, was opened by President Howard Taylor. The new dues schedule was well received

1946 Crop California Lovell

**Peach  
Pits**



Used and recommended by leading nurseries of United States. 4,500 seeds per bushel; uniform, high germination—outstanding vigor and growth. Sacked in good bags.

**ORDER NOW**—All seeds F.O.B. following places. Stephenville, Texas; Tyler, Texas; Amity, Arkansas, or McMinnville, Tennessee. Your order shipped from nearest point.

Sample on request. . . . . Terms Cash

No. Bushels	Per Bushel
1 to 5. . . . .	\$3.00
6 to 24. . . . .	2.85
24 to 99. . . . .	2.75
100 bu. and up. . . . .	2.50

Address all orders to **Wolfe's Nursery**, Stephenville, Texas.

Wire, Phone or Write.

**Wolfe's Nursery**  
STEPHENVILLE, TEXAS

**Send for Our Seed List.**

**A. B. C.**

**"Supreme" Quality  
SEEDS — PLANTS — BULBS**

and  
**Growers' Accessories**

**AMERICAN BULB CO.**  
1335 W. Randolph St. CHICAGO 7  
31 W. 27th St. NEW YORK 1

**PEACH PITS**

**THE  
Howard-  
Hickory  
Company**

Hickory, N. C.

**THE NURSERY MANUAL**

By L. H. Bailey

Describes methods of propagation and lists plants with practice for each.

470 pages.

Price, \$3.50

**AMERICAN NURSERYMAN**  
343 So. Dearborn St. Chicago 4, Ill.

by the membership. Reports were heard from the secretary-treasurer, Peter J. Van Melle, and the following committees: Membership classification, P. J. Van Melle, chairman; ethics and standards, Charles R. Mouquin, chairman; special appropriations, Leslie Engleson, chairman, and research advisory, R. L. Holmes, chairman. P. J. Van Melle, chairman of the educational advisory committee, reported on the successful schools for nurserymen held during the past two years at Farmingdale and hoped that arrangements might be made for another school this year. In view of the overcrowded conditions in schools and colleges it was thought advisable to consider alternate plans.

Dr. L. H. MacDaniels, head of the department of floriculture and ornamental horticulture at Cornell University, described the progress in postwar plans for the development of the department. Dr. MacDaniels said that the building program was integrated with the general postwar program for the college of agriculture.

Prof. M. T. Fossum gave figures on the progress of the nursery industry from 1890 to today, including the number of persons engaged in the industry and the acreage devoted to nursery stock, the value of the stock, land, buildings and other data. Information of this type has been available in the census, but has never been brought together in satisfactory form. The results of the business survey being conducted by New York nurserymen at the present time will aid greatly in completing figures obtained from census data and in permitting a more accurate interpretation. All New York nurserymen have been asked to send in their replies to the questionnaire, in order that results may be compiled before September 15.

In closing the meeting President Taylor urged the members of the association to become acquainted with their legislators and to keep abreast of developments on all issues that affect the nursery business.

The business meeting was followed by a directors' meeting at which plans were laid for the early completion of the business survey begun last winter.

A cafeteria supper and round-table discussion was held in Willard Straight hall during the evening, with John Kelly, Kelly Bros. Nurseries, Inc., Dansville, acting as chairman. The topics discussed included industrial relations, introduced by Prof. L. A. Emerson, of the school of industrial labor relations, Cornell University. "On-the-job Training for Veterans" was presented by H. S. Myers, agricultural training officer for the Vet-

**We Offer**

**RHUBARB SEEDS**

**New Crop**

**Myatt's Linnaeus and Victoria**

★ ★ ★

A complete line of small fruit plants. Real wholesale prices on **Currants, Red and Black Raspberry Plants, Grapevines, Thornless Boysenberry, Asparagus and Rhubarb Roots, and Nectarine Trees.** Prompt quotation upon receipt of your want list.

★ ★ ★

We are in the market for several thousand **Sweet and Sour Cherry Trees.** Also **Fruit Trees and Ornamental Shrubs** of all kinds. Send your surplus list for immediate consideration.

**THE ACKERMAN NURSERIES**

Bridgman, Mich.

**PEACH PITS**

**1946 Lovell**

	Per bu.
1 to 4 bushels. . . . .	\$3.00
5 to 24 bushels. . . . .	2.85
25 to 99 bushels. . . . .	2.75
100 bushels or over. . . . .	2.50

F.O.B. Cleveland, Tenn., or some point yet to be selected in Texas, Arkansas, Michigan and New York state. In good bags. Terms cash. Order now. Pits are scarce.

Also 1-yr. Apple Graft Whips, 2-yr. Apple, 1-yr. Peach, June-budded Peach, Plum and Apricot. 5-N-l Apple, Pear, Peach. Combination Fruit Tree, Plum-Peach-Apricot.

Send want list for quotations.

**GROW CONTRACTS**

June-budded Peach, Plum, Apricot and Nectarines, delivery 1947. One-year Peach, Plum, Apricot and Nectarines, delivery 1948. Peach Seed planting time is here. Can give the most advantageous contract prices before pits are planted.

**TENNESSEE NURSERY CO.**

Box 1,

Cleveland, Tenn.

**SEEDS**

**Collectors of Tree, Shrub and Wild Flower Seeds**

Crude Drugs and Ornamentals

**E. C. MORAN** Stanford, Mont.

erans' Administration, Ithaca district, and J. P. Germody, agricultural training officer for the Buffalo regional office. Both discussions were well received and entered into by the nurserymen present.

A series of questions from the question box included some on the various phases of the nursery industry. The questions were answered by Dr. D. S. Welch, of the department of plant pathology; Dr. William Blauvelt, and Karl Brase.

#### WOOD PRESERVATIVE TEST.

A recent report on tests at Cornell University, Ithaca, N. Y., with wood preservatives for greenhouse flats indicates that it is possible to increase the length of life of cheaper grades of lumber and that the material tested, Cuprinol, had no adverse effects on plant growth. Since some other preservatives containing mercury and creosote had been observed to have toxic effects on plants, Cuprinol was tested in closed chambers with plants and found to be nontoxic.

In conducting the tests to determine the value in preserving wood, flats were made of southern pine used in Florida orange crates. The flats were given a quick dip after nailing and filled with soil. The flats were then placed on rose benches, and each time the rose beds were watered, the soil in the flats also was watered. Other flats were handled in a similar manner except that they were not dipped in the wood preservative.

At the end of the first year, the untreated flats were so badly decayed that they could not be lifted. After two years, the treated flats were reported as good as new except that many of the nails had rusted and broken.

The report recommends treating flats after nailing. Wood for benches can be treated before nailing, but the nail holes should be daubed with the preservative after the bench is put together.

**FRANK S. HOLZSCHUH**, who recently returned from England, where he was stationed with the Eighth Air Force during the past three years, has reopened the Holzschuh Nursery, at Almonesson, N. J.

**PARTNER WANTED**—for very profitable nursery and floral business in southern Texas. Too big for one man. Unlimited opportunity for expansion. Only an energetic, reliable man with nursery, floral or landscape experience will be considered. He may buy a substantial interest in the business, but must be willing to work a month or so on salary first, and agree to a thorough investigation. Address Box 469, care of American Nurseryman.

**FOR SALE**—3-acre mail-order nursery, in good location; evergreens, shrubbery, vines, fruit trees, gladioli, dahlias, cannas and other items; retiring. **HOME NURSERY**, Liberal, Mo.

## WANT ADS

Help and Situation Wanted and For Sale advertisements.

Display: \$2.50 per inch, each insertion. Lines: 20¢ line; minimum order \$1.00

## PROPAGATOR WANTED

POSITION OPEN  
with a leading wholesale nursery.

Must be experienced in propagation from seeds, softwood cuttings, grafting, hardwood cuttings. Both greenhouse and hotbed propagation.

Also foreman over the department of approximately 30 employees.

QUALIFICATION STANDARDS HIGH  
GOOD POSITION FOR RIGHT MAN

Job-training program available to Vets.

Write

**LAKE'S SHENANDOAH NURSERIES**  
Shenandoah, Iowa

### FOR SALE

Long-established nursery, inside city limits, on heavy-traffic street; approximately one acre; 7-room home; lath houses and complete stock and equipment. Ornamentals only, excellent net. For photos and details, write

**WALLACE REALTY CO.**  
185 S. Market St. San Jose, Calif.

### FOR SALE

One-acre nursery, best of soil, over 5,000 saleable shrubs and perennials; near highway; good landscaping. 4-yr.-old house, fully furnished, with bath; greenhouse; nicely landscaped, 15 min. from downtown Seattle, Wash. 2 blocks to bus; all tools incl. Total price for all, \$7,500.00; reason illness. Address Box 459, care of American Nurseryman.

### FOR SALE

Nursery in New England specializing in evergreen lining-out stock, operated successfully 12 years as a mail-order nursery. Well stocked with many scarce items. Priced very reasonably. No encumbrance. Address box 457, care of American Nurseryman.

### FOR SALE

Myers Power Spray outfit, skid-mounted, 200-gal. tank; 6-horsepower engine. In good running condition. Write: **STEWART H. WILLSON**, 1087 Enfield Street, Thompsonville, Conn.

**HELP WANTED**—Apprentice to learn propagation and growing of lining-out stock and management of propagation nursery. Prefer some experience or/and horticultural schooling. If veteran, will train under G.I. bill benefits plus small apprentice wage. Teacher born in Boskoop, Holland, nursery center of the world. Nursery on Long Island, N. Y. Address Box 463, care of American Nurseryman.

### FOR SALE

Nursery established 1887. Modern buildings. Storage, brick and tile, 120x160 feet; packing and storage, brick construction, 32x160 feet; office building, 27x50 feet, with large fire-proof vault. All in good repair. Land, 250 acres level black soil; two irrigation wells within a mile of city limits; in nursery and farm crops. Rich agricultural territory; heavy drive-in trade, also good landscape business. Will sell buildings and any part of the land desired. Write **HARRISON NURSERY CO.**, York, Neb.

### 3 MEN WANTED

A fast-growing, well established nursery has openings for a landscape man, a planting foreman and a grower. Give experience in first letter. **SHAWNEE NURSERIES & LANDSCAPE CO.**  
7300 West No. 50 Highway  
Shawnee, Kansas

### HELP WANTED

Young man for assistant propagator on wholesale nursery stock, specializing in grafted hybrid Rhododendrons, Taxus, grafted Junipers, Azaleas, etc. Permanent position.

**KOSTER NURSERY**  
Bridgeport, N. J.

### HELP WANTED

Experienced nursery and landscape salesman; also a seed store manager; house in nursery furnished. **MALMO NURSERIES & SEED STORES**  
Seattle 5, Wash.

### LANDSCAPE FOREMAN

Old established landscape concern in prosperous city in Michigan wants landscape foreman. State age, experience, wages desired in first letter. Address Box 456, care of American Nurseryman.



# RECORD ATTENDANCE AT SHENANDOAH.

[Concluded from page 20.]

ing from other states exceeded expectations. Among the Minnesota contingent were C. H. and K. B. Andrews, Gordon Bailey, Michael and Terry Cashman, Kenneth Law and Bj. Loss. Nebraska representatives included Vernon and Chet G. Marshall, Harvey Williams, Jennings B. Hagerty, C. E. Baldwin and Charles and Fred Sondregger. Kansas was represented by Harold Crawford and Howard Dorman. Henry Dybvig was present from Colton, S. D. Paul Stark and Leo Roberts were among those attending from Missouri. Five representatives from Coe, Converse & Edgards Co., including Paul May and Alfred Witt, were present from Wisconsin. Clarence Welch represented the Semmes, Ala., branch of the J. C. Welch Co.

R. S. Herrick, veteran secretary of the Iowa State Horticultural Society, who retired this spring, and his successor, William H. Collins, attended. Mr. Herrick is now devoting his attention to his fruit-growing interests.

Several of the Iowa nursery firms, including Marshall Nurseries, Rose Hill Nursery, Sherman Nursery Co., Earl Ferris Nursery, Des Moines Nursery Co. and Lake City Nurseries, brought along some of their employees.

This summer meeting was one of the best attended in the history of the Iowa State Nurserymen's Association. Nurserymen who attended came away with new ideas, a better appreciation of the nursery business and enthusiasm for future developments.

## VIRGINIA MEETING.

[Concluded from page 14.]

cultural farm at Blacksburg. This farm has been purchased largely through funds donated by various horticultural interests in the state. The nurserymen of Virginia have had a part in the undertaking, and approximately twenty-five acres will be devoted to experimental work on ornamental plants and another forty acres to the establishment of an arboretum.

## LAWN SEED SHORTAGE.

Frankly, O. M. Scott & Sons Co., Marysville, O., tells customers in a recent mailing: "The harvest of grass seed suffered such a setback from the late frosts that production hit the low spot for modern times. On the heels of last year's below normal crop, this year's catastrophe strikes a hard blow.



Pat. No. 110110

**\$35.00**

F.O.B. K. C. Kansas

# NURSERY HAND TRUCK

Material shortages still limit production. We are grateful for the understanding patience of our many good customers who accepted delayed delivery this Spring. We are continuing to ship as quickly as we can, filling orders in the same order we receive them. We suggest that you order now for your Fall season needs.

## SPECIFICATIONS

Equipped with Jumbo Balloon Tires and Tubes, 15x4 inches.  
Specially Designed Curved Nose.  
All-steel Construction, electrically welded.  
Weight 56 pounds.  
Over-all Length 62 inches.  
Over-all Width 27 1/2 inches.  
Capacity 28-in. Ball weighing 600 pounds.

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## PROTECT valuable young TREES

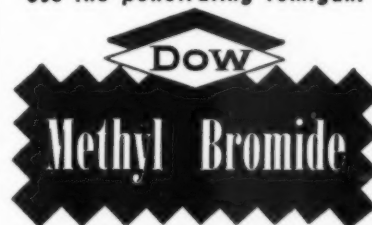
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- This tough fibre guard locks on in two seconds.
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## FOR BEST RESULTS

use the penetrating fumigant



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## MICHIGAN PEAT— Nature's Finest Soil Builder

Used by leading growers for 30 years. Rich in nitrogen and plant food. Economical. COSTS LESS TO USE! Packed in 100-lb. bags, averaging 4 bu. Prices F.O.B. Capac, Mich. Each

1 to 19 bags.....	\$1.65
20 to 99 bags.....	1.50
100 to 400 bags.....	1.40

Bulk cars, \$14.00 per ton.

American Soil Sponge Selling Corp.  
267 Fifth Ave. New York 16, N. Y.  
Plant Capac, Mich. Capac 62.

## CUPRINOL

Preserves wood from rot.

Dyed green. Serves as priming coat.

INCREASES LIFE OF PAINT.

WILL NOT HARM PLANTS.

1 gal. will cover 400 sq. ft.

	Per Gal.
Gal. ....	\$2.90
5 Gals. ....	2.80
50 Gals. ....	2.70

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The prices we are compelled to ask for Scott's lawn seed are quite abnormal. We dislike quoting them, but there is no choice except to lower quality, which you do not want us to do and which we have not considered."

In its periodical folder on lawn care, the company explains: "Not since 1937 has there been a big grass seed harvest. Since then the yields of important varieties have been successively less until this year they approached the vanishing point in some of the largest producing areas.

"Meanwhile, turf needs have in-

creased by leaps and bounds. During the war years, many new factory lawns were seeded, and thousands of acres of turf were required by the government at military camps and on the country's new airfields. This exhausted all reserve supplies of seed.

"With consumption going up and production going down, the crop failure this year sent market prices to an all-time high. Therefore, sharp price advances are a necessity this fall if quality is to be maintained."

*Solve all your packing problems.*

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Plain — Full Depth — Open Top  
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IMMEDIATE DELIVERY

Order today at saving while  
100,000 stock lasts!

11½ ins. wide, 10½ ins. high,  
17¾ ins. long.

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A liquid spray for  
**NURSERIES, ORCHARDS,  
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An odorless, concentrated, balanced  
plant food. All nutrients, trace elements  
and plant hormone. Water soluble. At-  
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Fast Seller . . . Big Profits. Nationally  
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**Pour it on • Watch 'em Grow!**

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319½ Georgia St., Louisiana, Mo.

Loss and damage claims against  
railroad and express companies  
collected.

Freight bills audited.

Past due notes and accounts  
collected.

Well known to the nurserymen  
of the country.

Reference: Bank of Louisiana.

## ARIENS-Tiller



THE MOST COMPLETE  
LINE OF TILLAGE EQUIP-  
MENT IN THE WORLD.  
CAPACITIES 14 IN. TO 7  
FT. CUTTING WIDTHS.

**ARIENS CO.**

BOX 710 DILLON, WIS.

## MICHIGAN MEETING.

[Concluded from page 12.]

His answer was 7,000 acres, 6,500 be-  
ing the correct answer.

Jack Hoxie, superintendent of the  
Hidden Lake Gardens, near Adrian,  
was introduced and spoke briefly. He  
stated that principally a rejuvenation  
program had been under way since  
he took over the gardens recently  
given to Michigan State College by  
Harry A. Fee, of Adrian. He invited  
the nurserymen to inspect the prop-  
erty at any time.

C. A. Boyer, director of Michigan's  
bureau of plant industry, spoke  
briefly, telling of the lifting of more  
state quarantines during the past five  
years than during the previous twenty-five years. This means that there  
are fewer state barriers all the time.  
He reported the removal of 160,000  
diseased orchard trees so far this year  
and of the favorable cleanup of nurs-  
ery stock in Michigan nurseries. He  
predicts a bright future for nursery-  
men, based partly on the large num-  
ber of inquiries for nursery stock  
that come to his office.

In the closing minutes of the meet-  
ing, Charles Greening, Monroe,  
chairman of the resolutions commit-  
tee, recommended a resolution be  
forwarded to the American Associa-  
tion of Nurserymen, through Richard  
P. White, executive secretary, re-  
garding article 3, section 1, of the by-  
laws of the A. A. N. The resolution  
favors the definition of a nursery-  
man as following that which was  
handed down by the Federal Trade  
Commission. The resolution was  
unanimously accepted. The Michigan  
men believe in retaining the A. A. N.  
as a nurserymen's organization and  
not admitting firms as active members  
whose sole connection with nursery  
stock is in the merchandising of the  
products.

J. G. Vucich, operating the Michi-  
gan Gladioli Farm, at Watervliet,  
was accepted as a new member in the  
Michigan association.

The evening preceding, the meet-  
ing was given over to a picnic supper  
at Jean Klock park on the shores of  
Lake Michigan. Here, the nursery-  
men and their families enjoyed a  
bountiful supper. Opportunity was  
given before and after the supper  
for a get-together with friends.  
Walter Montfort, Benton Harbor,  
and A. W. Krieger, Bridgman, were  
cochairmen for the party. They were  
assisted by their wives and President  
Clifford Emlong and Mrs. Emlong.

LESTER G. DE NIKE, tree sur-  
geon, has been discharged from the  
service and is back in business at  
Pequannock, N. J.

## SPRAY WITH.. C. P. O.

Use this *Safe, Odorless, Non-Poison-  
ous Spreader* in place of fish oil soaps  
and summer oils.

### FOR BETTER CONTROL OF

Lace Bug	Pine Leaf Scale
Red Spider	Spruce Gall Aphid
Juniper Scale	Euonymus Scale
Lilac Scale	Aphids

And Most Sucking Insects on Ever-  
greens and Ornamentals

Write for information and samples  
and learn how you can reduce cost of  
nicotine sprays one-half.

**Crystal Soap & Chemical Co., Inc.**

Department A N

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## ATTENTION NURSERYMEN!



## IMP. SOAP SPRAY

Use 1 part with 25 to 40 parts of water

Ask your nearest seedman, or  
write for literature.

**THE AMERICAN COLOR AND CHEMICAL CO.**

176 Purchase St.

Boston, Mass.

## PEAT

Now booking bulk car shipments  
for 1946 spring and summer de-  
livery of Black cultivated Peat and  
Moss Peats.

"Quality Peats for all Purposes."

**ELI COLBY COMPANY**

Hanlontown, Iowa

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with **COPPER SOAP**

rodent repellent

Easily applied, economical, effective.  
One application lasts entire season.  
**YOUR NURSERYMAN OR SEED  
DEALER HAS IT. Write for detailed  
literature.**

**CASTLE CHEMICAL CO.**

Castle Rock, Minn.

## "GRO-QUICK" ELECTRIC SEED BED HEATER

**BOTTOM HEAT CAN'T BE BEAT**  
For early plant starting with high  
germination and fast growth. In-  
valuable for rooting cuttings. Soil  
heating cable and thermostat for  
plant benches and coldframes. De-  
tailed instruction sheet mailed free.  
GRO-QUICK, 380 W. Huron St., CHICAGO, 10.



# QUICK, SURE ROOTING MEANS MORE PROFIT

## WHERE AND HOW TO USE TRANSPLANTONE

Treat broad and narrow leaf evergreens, deciduous trees and shrubs. Soak the soil around the roots when planting or soak bare-root plants overnight in a barrel of the solution before replanting. The treatment will not interfere with proper hardening of the wood before winter.

It pays to use Transplantone solution when transplanting shrubs and trees. Transplantone-treated shrubs and trees suffer less from shock and wilt, fewer of them die, *more* of them start active growth *sooner*.

### A LITTLE TRANSPLANTONE GOES A LONG WAY

One pound of Transplantone makes 160 gallons of solution for treatment of trees and shrubs or 1600 gallons of solution for seedlings and soft-tissued plants.

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**TRANSPLANTONE**

A 3-oz. can of TRANSPLANTONE costs \$1.00

A 1-lb. can of TRANSPLANTONE costs \$4.00

Write today for our special terms to nurserymen.

**AMERICAN CHEMICAL PAINT COMPANY**  
Ambler, Pa.

## NURSERY FERTILIZATION.

[Concluded from page 29.]

times as much per pound as nitrogen obtained from ammonium sulphate.

The cheapest and best source of phosphorus is superphosphate. Potassium chloride (muriate of potash) is a satisfactory source of potash. The most profitable complete fertilizer to buy will depend upon its use and the total units it contains. Complete fertilizers should not contain less than a total of twenty units of nitrogen, phosphorus and potash.

Growers frequently employ bone meal as a source of phosphorus and to add a small amount of nitrogen. Based on present costs, the same amount of essential elements contained in 100 pounds of bone meal could be obtained from ammonium sulphate and superphosphate for sixty per cent of the cost of bone meal. Furthermore, the elements in ammonium sulphate and superphosphate are more readily available.

RESUMING a business interrupted by the war, Frank F. Shinn has reopened the Cactus Room, at Boyertown, Pa.

RECENTLY discharged from the service, Joseph A. Chester has resumed his landscaping service at Boise, Ida.

## Those YELLOWING LEAVES may turn GREEN IF YOU SPRAY THEM WITH

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and Free Sample



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For General Anemic  
Condition of Plants

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USE HYPONEX for top dressing, seedlings, cuttings and transplants. Produce strong root systems and stems, also more and larger flowers and fruit.

SELL HYPONEX to your customers. Nationally advertised.

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7 oz. can... 50c.—packed 24 to case—wt. 14 lbs.  
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10 lb. drum \$8—25 lbs. \$15—50 lbs. \$25—100 lbs. \$40  
Commercial growers and dealers receive 33-1/3% discount from the above retail prices.

BUY HYPONEX from your jobber or send \$1 for 1 lb. (makes 100 gallons). \$1 credited on first order for 1 drum or case.

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Kitchen Seals

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BROADWAY RUBBER MFG. CO. LOUISVILLE 2, KY



## INDIANA MEETING.

[Continued from page 13.]

stimulated to a strong healthy growth, this would kill the bark borers, which could not stand the expansion of the trunk. In reply to a question, Dr. Davis recommended oil sprays for the control of white flies. Not much is known about the control of taxus mealy bugs, but nicotine, one pound to 100 square feet, applied with a Du Pont spreader after the bugs have started to crawl will aid in control.

DDT is being used experimentally on Jap beetle grubs at the rate of five pounds per acre. This insecticide proved effective on the codling moth, but red spiders increased after DDT was applied because the enemies of the mites were destroyed. Dr. Davis reported that the Dutch elm disease situation is not so bright as it has been. There are 125 infested trees in the Indianapolis area alone.

Frank Littleford, of Littleford Nurseries, Vincennes, told about "Growing Magnolias As a Specialty Crop" and prefaced his talk with a short history of the Littleford Nurseries. Conditions at Vincennes were found favorable for the growing of magnolias, because of good rainfall with a light to medium loamy soil. Only deciduous Chinese types were lined out, as it was felt that the nursery was too far north for the evergreen magnolias to be profitable as a wholesale crop.

Mostly three varieties of the soulangeana type have been planted—the regular soulangeana, soulangeana lennei and soulangeana nigra. M. stellata rosea and M. stellata waterlily are also grown. All the above-mentioned produce a good-quality bloom. Soulangeana is a medium to light pink, soulangeana lennei has a large medium-red flower and soulangeana nigra is dark purplish-red. These three types attain a height of approximately twenty feet.

Soulangeana nigra has a bushier habit than the other two soulangeanas. Most of the time it grows broader than it is tall. Lennei is taller than broad, and soulangeana comes somewhere in between. All can be grown in bush form or, with a little pruning, will attain tree form. Magnolia stellata and M. stellata rosea are of regular bush form, attaining a height of approximately eight feet. They have a water-lily type of flower and are about the earliest bloomers of the hardy magnolias.

There are four ways of propagating magnolias—by seeds, grafts, cuttings and layers. Seeds are somewhat slow, and the plants grown this way do not come true to type, and grafts and cuttings are not so successful. Layer-

**RA·PID·GRO**  
See results IN 24 HOURS  
HUSKIER PLANTS... that yield  
BIGGER AND BETTER FLOWERS...  
FRUITS... VEGETABLES...



PLANTS NEED  
FEEDING ALL  
SUMMER!

**makes  
fibrous roots,  
healthy stock.**

**SELL IT TO YOUR CUSTOMERS** — Saves thousands of dollars in replacements. Brings repeat business in both stock and Ra-pid-gro from satisfied customers. A real good-will ambassador.

**FEED IT TO YOUR STOCK** — Feed your stock while it is growing. Produces stock that will live when transplanted. Ra-pid-gro is economical, only twenty pounds to the acre.

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A design project covering problems on property of your choosing is incorporated in your course. This project is developed under the guidance of our Landscape Architects who follow it through to completion thus insuring coverage of your regional conditions.

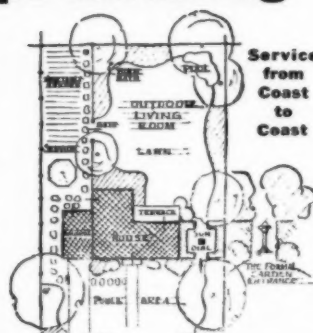
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**National Landscape Institute**  
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Service  
from  
Coast  
to  
Coast

ing is the best process. It is not rapid, and two years are necessary for good soulangeana layers.

Frank Turner, of Berryhill Nurseries, Springfield, O., spoke on "The Proper Pruning and Shearing of Evergreens," but first he mentioned the scarcity of nursery stock, saying that all sizable stock lined out this spring will reach a ready market. Arborvitae, which has not been so popular in late years, is staging a comeback because of the scarcity of other uprights, and Mr. Turner predicted that yews may be plentiful in some sections, but not west of Ohio. However, some nurserymen who traveled east to buy yews were unsuccessful and then found them in Ohio.

Mr. Turner told of the new practice of some nurserymen of setting plants farther apart in the nursery. He said that yews were space eaters because they stood so long in the field.

Because of war conditions the Berryhill Nurseries were unable to finish shearing and pruning in good weather; so this work was done in winter, even when there was frost on the plants. The results were satisfactory. In shearing junipers Mr. Turner

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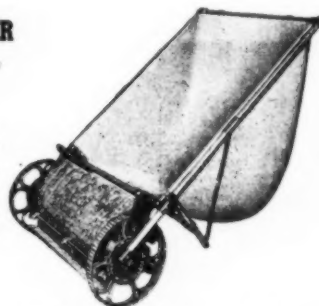
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No. L-241—1-pint cans, each	\$ 2.10
Resale—case of 24 cans	33.60
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##### "Springfield"

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Leaves and sticks  
swept up clean in  
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takes to rake. Does  
an easier and cleaner  
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and turf than the hard, stiff tines of a rake.

No. L-146—28 inches wide.....each \$44.75

☞ Complete—with rubber-tired wheels.  
In stock—shipped immediately.

found it better to take out a little at a time than to shear too heavily. One good shearing method was to cut out the top. He stated that staked young pitizers and staked young taxus make more growth and that staked pitizers are easier to dig and ship. He does not believe in shearing arborvitae because it sets it back. In shearing spruce, he advised nurserymen to shear every other year. Hemlock should be sheared frequently.

Mr. Turner has found that mealy bug is easier to combat if taxus is left somewhat open, until just before marketing. He said there was no chance of a brush pile at his nursery this year, but advised nurserymen to line out only what they could sell rather than to overplant.

Lowell Moore, of the Gaar Nursery, Chesterfield, Ind., who won second prize in the sales and display grounds design competition, sponsored by the National Landscape Nurserymen's Association, showed a replica of his plan and discussed all of its features. He said the object of a sales yard was for sales; therefore, the arrangement should not only be attractive and unified but convenient for customers in making their purchases and for the nurseryman in handling his sales. Much interest was shown in his plan.

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GREENHOUSES formerly in the rear of the York road offices of the Towson Nurseries, Inc., Baltimore, Md., are being rebuilt at the Kennilworth division, Cockeysville, Md. Under the active direction of Will Price, the firm is constructing new buildings which will house offices,

garages, an automobile repair shop and storage rooms, using lumber from its own woodlands. Mr. Price takes great pride in his prize cattle, which have won numerous awards. He is also a director on the board of the Timonium fair, one of the outstanding events in that section.

## PLANT NOTES.

[Continued from page 23.]

per parts. The type seldom exceeds six inches here and has narrow leaves, quite linear in shape.

Lady's-fingers have long intrigued me as wall ornaments, and this planting confirmed my opinion that the genus deserves far more consideration from gardeners. The plant's silvered leaves (an obsession of mine) are season-long ornaments, and the pea flowers (yellow in the type, red in variety dilleni, pink and white in alpestris and violet in illyrica) are a delight in many situations in the summer garden. *Vulneraria* in some of its forms is the kind most often seen in this country, although I am not fully convinced that it is the best. In fact, I prefer *A. montana* on several scores. It, too, has silvered leaves, and its flowers are quite fragrant, which is quite an attraction to me and to all who enjoy their gardens through senses other than that of sight. *Montana* also varies not a little in color, although all the plants that I have grown from seeds were some shade of red. Selected forms of the *anthyllis* may be propagated by division and perhaps from cuttings, although I have not tried the latter. They are also easily grown from seeds, if a little care is taken to carry them through the seedling stage.

## Moss Phlox.

The use of moss phlox, *P. subulata*, confirms an opinion I have expressed in these columns before. Beyond a doubt, more gardeners, especially those with small planting space, would use this plant if its varieties with restrained growth habits were known. Commercial producers of plants who are more interested in immediate profits and beginning gardeners who want to cover as much space as quickly as possible for the least amount of money are principally responsible for the present eclipse of this worthy plant in some quarters. A few years ago a friend and I watched the plant sellers in a public market in one of our large cities selling baskets of pansies, forget-me-nots, English daisies and moss phloxes. It was easy to see the buyers were mostly beginners, buying from sight rather than from knowledge. We followed one pedestrian to his home a few blocks away, and as we suspected, he was planting the phloxes in an incongruous pile of rocks in his front yard. Three years later when I was in that vicinity I passed that way to see what had happened to the hopeful rock gardener. I need not say that even the rocks were covered by a rampant growth of moss



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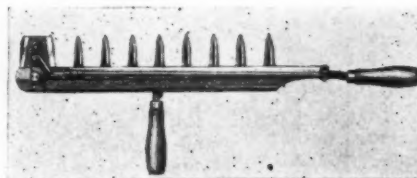
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phloxes. You may say that he got exactly what he bought, and I reply that he did not know what he was buying. I might add, also, that, while the plants concealed an atrocious example of a rock garden, they probably cured that gardener of the moss phlox fever. That is nipping a phlox fan in the bud and spoiling many future sales.

I was interested then in seeing how the gardener I had just visited used moss phloxes. I neglected to make

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Rye, N. Y.

note of the plant associations in which these plants played a part and remember only *sempervivums* and *phloxes* in one and incrustated *saxifrages* and *phloxes* in another, but I did make note of the *phlox* varieties



as shown by the labels. These were Leuchtstern, Schneewitchen, Vivid and another that I took for Ronsdorf Beauty, although it was not labeled. That is a wise selection of restrained kinds, I think, for one could plant them among one's most delicate plants, knowing that they would live amicably for years. If your customers rebel against the rampant phloxes, I suspect you will find a different reaction if you show them these and other restrained varieties.

Unfortunately, most slow-growing plants are also slow propagators. Division, which is used on the rampers, is quite impossible on a commercial scale in most cases. Rapid increase may be had, however, from cuttings. If you have a schedule for that work, my method may not interest you, but if you have had trouble with Vivid, Leuchtstern and others of their kind, try rubbing off cuttings with a heel in September, and insert them in a frame in sandy soil and keep them watered and half-shaded for two or three weeks. This should produce plants with enough roots to keep them anchored during the freezings and thawings of winter. They may then be lined out until large enough to sell.

#### Balloonflowers.

After seeing the uses of balloonflowers in this garden, I went to the library to see what current literature had to say about the plant as a garden ornament and was surprised at the silence maintained by our writers on the subject. In fact, a survey of garden literature in general makes one suspect that most writers have formed a conspiracy of secrecy against the plant. In any event, the plant is seldom mentioned, and as a consequence many beginning gardeners are missing one of summer's most pleasant companions and a plant of vast possibilities in the making of landscape pictures. Rather than try to outline its garden uses, an impossible task in a small space, it may be that a short account of the plant will suggest some of its possibilities.

The name platycodon covers a wide variety of material, although all except the monstrosities with fully double flowers have broad bell-like flowers which open from balloon-shaped buds. A packet of seeds will likely yield both single and double flowers, as well as colors from white and milk-white through shades of blue to purple. They will also be variable as to stature, some, like mariesi, not exceeding a foot, while the more robust descendants of japonicum may grow three or more feet tall in good soil. In fact, I saw

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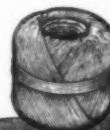
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in the garden mentioned several plants under the label of *P. praecox gigantea* that were over four feet tall. This variability and a long blooming period, which generally covers the summer months, make it a highly valuable plant, one with great possibilities in the making of summer pictures.

### Lychnis Arkwrighti.

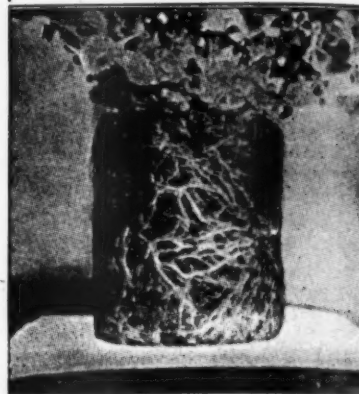
There was a plant, *Lychnis arkwrighti*, in a garden that I seldom see any more; so I thought it an opportune time to call the attention of newcomers to the trade to a worthy, though neglected, subject. I had meant to make inquiries among tradesmen to see why they have dropped it, but thought it better to write the note while the matter was fresh in mind. I think, however, that I know one or two reasons, and we shall examine them first.

The colors, especially the orange-scarlet ones, may be against the plant in some quarters, but I doubt if anyone would object to the pink kinds, particularly the numerous salmon-pink ones which come in most lots of seedlings. I doubt, however, that the colors are entirely at fault. It might be that the plant's short life under some conditions is responsible. I remember a letter I had from a nurseryman several years ago in which he stated that his customers reported heavy transplanting losses and also winterkilling. It is true that *L. arkwrighti* resents disturbance of its roots, and we learned early that it was necessary to grow it in pots for late spring sales. Its parentage, which I shall mention later, points to a certain amount of tenderness to cold, but I suspect that too much moisture around the crowns during winter has more to do with winter losses. If you have had trouble on that score, try putting it where water will drain away from the crown. As I understand the matter, it is a multiple hybrid, coming directly from a mating of *L. chalcidonica* and *L. haageana*, while the latter is itself a hybrid, being the result of crossing *L. fulgens* and variety *sieboldi* of *L. coronata*. The slight tenderness to cold sometimes shown by *L. arkwrighti* in my climate, may come from the last two kinds, neither of which is reliable here. It would pay you, I think, to give *arkwrighti* another trial in the light of these observations.

A NOTICE of intended sale has been filed by Curtis D. and Bertha Pearson, who intend to sell the nursery business known as Rosemead Gardens at East San Gabriel, Cal., to Donald K. King and Alice E. King.

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Corresponding Clay Pot	6-in.	7-in.	8-in.	9-in.
Approx. Weight Per 100	35 lbs.	52 lbs.	78 lbs.	88 lbs.
Per 100	\$ 2.75	\$ 4.00	\$ 4.50	\$ 5.00
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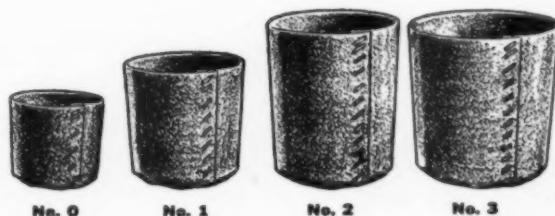
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	Per 10	Per 100		Per 10	Per 100
<b>UPRIGHT JAPANESE YEW</b>			<b>COMPACT SPREADING YEW</b>		
1½ to 2 feet xxx B&B.....	\$ 62.50	\$600.00	15x15 inch xxx B&B.....	\$42.50	\$400.00
2 to 2½ feet xxx B&B.....	92.50	900.00	18x18 inch xxx B&B.....	52.50	500.00
2½ to 3 feet xxx B&B.....	120.00		<b>BROWN'S YEW</b>		
3 to 3½ feet xxx B&B.....	150.00		10 to 12 inch xx B&B.....	14.50	135.00
3 to 3½ feet xxx B&B Extra Heavy	200.00		4½x4½ feet xxxx B&B. Each, \$50.00.		
3½ to 4 feet xxx B&B Extra Heavy	225.00		<b>HATFIELD YEW</b>		
4½ to 5 feet xxx B&B Extra Heavy	425.00		15 to 18 inch xx B&B.....	14.50	135.00
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24x24 inch xxx B&B. Each, \$20.00.			2 to 2½ feet xxx B&B.....	52.50	500.00
30x30 inch xxx B&B. Each, 25.00.			2½ to 3 feet xxx B&B.....	60.00	
36x36 inch xxx B&B. Each, 30.00.			3½ to 4 feet xxxx B&B. Each, \$35.00.		
<b>SPREADING JAPANESE YEW</b>			<b>INTERMEDIA YEW</b>		
12 to 15 inch xx B&B.....	15.50	145.00	2 to 2½ feet xx B&B. Each, \$100.00.		
12 to 15 inch xxx B&B.....	32.50	300.00	<b>DWARF JAPANESE YEW</b>		
15 to 18 inch xxx B&B.....	40.00	375.00	10 to 12 inch xxx B&B.....	30.00	275.00
1½ to 2 feet xxx B&B.....	62.50	600.00	12 to 15 inch xxx B&B.....	32.50	300.00
2 to 2½ feet xxx B&B.....	85.00		15 to 18 inch xxx B&B.....	45.00	
2½ to 3 feet xxx B&B.....	120.00		1½ to 2 ft. xxx B&B.....	55.00	
3 to 3½ feet xxx B&B.....	160.00		2½ to 3 ft. xxxx B&B. Each, \$25.00.		
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